

China Reconstructs

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JANUARY 1973





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COVER PICTURES:

Front: Colored clay figurines from Wusih, Kiangsu province (see p. 44).

Inside front: The People's Victory Canal, a 7,500-kilometer drainage and irrigation system serving an area of 600,000 *mu* (40,000 hectares) in northern Honan province (see p. 8).

Back: Evening at the Lenghu Refinery in the Tsaidam Basin (see p. 22).

Inside back: Installing a pipe for a new hydro-power station fed by a spring in Lingchuan county, Shansi province.

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Festival

May Day (International Labor Day) and National Day on October 1 are two important festivals celebrated by the Chinese people. Gala parties are held in all the major parks in the capital and other cities. Temporary stages are set up in the parks where professional troupes as well as amateur groups from factories, schools, offices, army units and people's communes in the outskirts give performances of music, acrobatics, songs and dances. These photos were taken on October 1, 1972 as the people of Peking celebrated the 23rd anniversary of the founding of the People's Republic of China.







Ho Hsiang-ning.

CHINA'S revered woman revolutionary, Ho Hsiang-ning, breathed her last in the early dawn of September 1, 1972. Four days later in the Great Hall of the People, hundreds of her comrades and relatives and representatives of public institutions and governmental offices paid their last respects to her. She was a close revolutionary comrade of Sun Yat-sen, the devoted and courageous wife of the Kuomintang elder, Liao Chung-kai, and a close friend of the Chinese Communist Party.

I first met her shortly after my arrival in Japan from Shanghai just after my marriage to Sun Yat-sen in October 1915. She was then known to all Chinese students as "Oba-san" (meaning Aunt) due to her long residence in Tokyo. Her husband was a most trusted comrade of Sun Yat-sen.

Tens of thousands of Chinese were then studying in Japan, hoping thereby to learn how to modernize weak, feudal, oppressed China. How could a small nation like Japan have defeated the all-powerful Tsarist Russia? Many of these students had heard about their ancestors and relatives who had perished in the war Britain forced on us in 1840, when she invaded Kwangtung and other coastal regions of China. This had been done on the pretext of promoting trade, but, in reality, it was to allow her to traffic in opium over the strong protests of the Chinese. The Chinese troops under Lin Tse-hsu had fought a determined war of resistance.

From 1856 to 1860 Britain and France jointly carried on a war of aggression against China, while

HO HSIANG-NING

America and Tsarist Russia supported them from the sidelines. The Ching dynasty was then devoting all its energy to suppressing the peasant revolution of the Taipings.

The Anglo-French Allied Forces occupied the cities of Kwangchow (Canton), Tientsin and Peking, plundered and burnt down the Yuan Ming Yuan Palace in Peking and forced the Ching government to conclude the Treaty of Tientsin and the Treaty of Peking. The main provision of these treaties included the opening of Tientsin, Nanking, Hankow and several other cities as "treaty ports". From then on foreign forces of aggression extended themselves all over China's coastal provinces and penetrated deeper into our hinterland.

In 1883 and 1884 the French invaded Viet Nam and the Chinese provinces of Kwangsi, Fukien, Taiwan and Chekiang. China's troops vigorously resisted and won a series of victories. Nevertheless, the Ching government signed the humiliating Treaty of Tientsin and permitted the French forces to penetrate further. It is calculated that in the 50 years before 1911 China paid out to Britain exorbitant sums — thousands of millions of taels — for opium!

These humiliations naturally caused great unrest among the Chinese, who went in great numbers to foreign countries, especially to Japan, to gather knowledge of how to save their exploited and oppressed motherland.

AFTER Ho Hsiang-ning married Liao Chung-kai in Hongkong she learned of her husband's determination to go to study in Japan, but that he was without funds. She decided then to sell all her jewels, as she came from a very wealthy family and had a big dowry. Two months after his departure for Japan, she left to join him in Tokyo. She also entered school to study the language and learn painting. It was there that she came into contact with revolutionary elements who introduced her to Sun Yat-sen.

Whenever Sun Yat-sen and the students in Tokyo held revolutionary meetings, these had to be held in the utmost secrecy, for the Chinese Minister there as well as the Japanese government were always on the alert against progressive students and had forbidden their meetings and gatherings. Sun Yat-sen absolutely trusted the Liao couple and decided henceforth to hold all meetings at their house. Ho Hsiang-ning

G—A STAUNCH REVOLUTIONARY

(1877—1972)

Sung Chung-kuang

undertook the duty of hiding all shoes, boots and *getas* worn by the students, which according to the Japanese custom would ordinarily be left at the gate before entering the room. It was then that Ho Hsiang-ning met Chiu Chin, a woman revolutionary who was executed by the Ching dynasty rulers in 1907.

Many struggles were planned to capture a stronghold in Kwangchow but they all ended in failure. When Sun Yat-sen returned with some comrades to capture Kwangchow, many of them were killed, among them the 72 martyrs who were later buried at Huanghuakang there. Sun Yat-sen and several others managed to disguise themselves as fishermen and evade capture by heading for Macao.

Although the attempt to assassinate the Manchu governor of Kwangtung had ended in failure and the death of the heroic 72 martyrs, the news reverberated over all China; it shook the foreigners and deeply moved our own countrymen.

WHEN the revolutionary Kuomintang government was finally established in Kwangchow in 1921, Liao Chung-kai became Minister of Finance. Ho Hsiang-ning once told me that corruption was rife in certain government offices, even in the Treasury Department where some people were using double envelopes for thieving purposes, but that this was discovered by her husband, who, though very much occupied, was meticulous in all his work.

A Northern Expedition was decided upon to wipe out the military satraps who were mercilessly killing revolutionaries and oppressing the people. Leaving reliable colleagues behind to assume his government duties, Sun Yat-sen headed the expedition and from Kweilin in Kwangsi province advanced upon Hunan province.

The treacherous governor of Kwangtung and Kwangsi, Chen Chiung-ming, kept 25,000 troops in Kwangchow on the pretext of protecting the provinces from attacks by the Northern warlords. Taking advantage of Sun Yat-sen's absence from Kwangchow, he connived with Chen Lim-pak, the comprador of the Hongkong-Shanghai Bank, who had been supplied with funds by the British for the purpose of ousting Sun Yat-sen. They sabotaged the Northern Expedition by refraining from sending military supplies to

the front. While our troops captured city after city in Hunan, Teng Chung-yuan, a loyal Kuomintang comrade who, while in charge of military supplies, had secretly managed to deliver supplies to Kweilin, was assassinated by the traitor Chen.

Sun Yat-sen was forced to return to Kwangchow. In those days travelling was slow and it took more than two weeks to reach that city. He immediately called a conference of the newsmen, thereby hoping that public opinion would force Chen to send his troops to participate in the Northern Expedition. Traitor Chen wired Liao Chung-kai to go to Hweichow on the pretext of receiving funds for the treasury, then had Liao taken instead to the arsenal Shih-ching and chained hand and foot to a pillar.

On the morning of June 16, 1922, Ho Hsiang-ning heard great commotion and fierce rattling of machine guns and rifle fire. This caused her to suspect treachery. She went straight to Yeh Chu, who had been entrusted by Chen to guard the city, demanding to know the reason for creating such great confusion and taking so many innocent lives, and the burning

Ho Hsiang-ning (seated), Liao Chung-kai (second from right) and their son Liao Cheng-chih and daughter Liao Meng-hsing in Yugawara, Japan, in 1918.



of houses and looting by his troops in the city. When she saw the Government Headquarters burning, she demanded to know where Sun Yat-sen was. Yeh answered sarcastically, "Don't you hear his bombardment from the cruiser *Yungfeng*?" She demanded to know where her husband was and where I was.

Ho Hsiang-ning later heard from a woman comrade that I had succeeded in escaping during the melee when enemy troops rushed in to loot the Government Headquarters. She came to a friend's house on the outskirts of the city and found that I had really escaped. She then demanded to see her husband. She was taken to Shihching and saw him chained to a pillar. Guards stood over them as they talked. What agony she suffered! She then took a sampan and reached the cruiser *Yungfeng* where she found my husband, dripping wet, standing in the boiling heat beside the stoker. She later managed to send him changes of clothing.

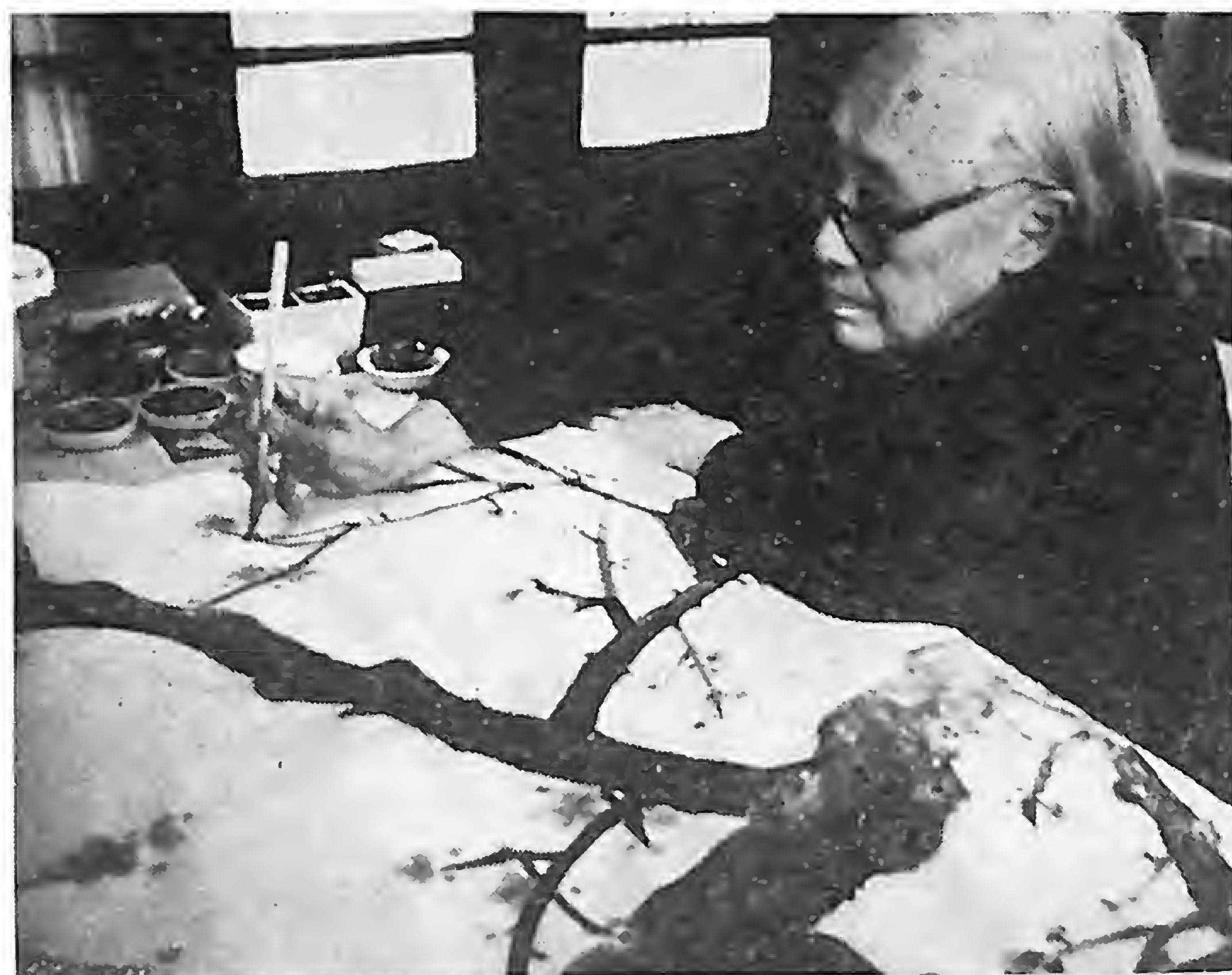
Unfortunately, the original manuscripts of Sun Yat-sen's writings and some yet-unpublished works were destroyed when the troops of the traitor and renegade Chen Chiung-ming set fire to his dwelling on the Kwanyinshan in 1923.

Ho Hsiang-ning always loyally supported Sun Yat-sen's Three People's Principles — Nationalism, Democracy and Livelihood — with particular emphasis on the last. The victory of the Kuomintang in 1911 was the death knell to 2,000 years of dynastic rule and marked the beginning of modern China. Ho Hsiang-ning had taken part in bringing this about. When the Three Cardinal Policies (alliance with Soviet Russia, cooperation with the Chinese Communist Party and assistance to the peasants and workers) were formulated, Ho Hsiang-ning and her husband took on a greater burden and were attacked and slandered by some of their erstwhile revolutionary comrades.

On August 20, 1925, when they were on their way to attend an important meeting of the Kuomintang headquarters, Comrade Liao, who was walking ahead of his wife, was fired on and killed outright. Giving vent to her deep grief, Ho Hsiang-ning upbraided the scoundrels who had plotted this dastardly murder in the hope of destroying the Three Cardinal Policies by their brutal act. Nevertheless, she worked even harder and brought up her children to become fervent revolutionaries.

Later she went to Shanghai and joined me in all my relief attempts to establish hospitals and raise funds for our wounded soldiers of the 19th Route Army, which alone resisted the Japanese invasion there in early 1932. At a time when we felt deeply humiliated and depressed by Chiang Kai-shek's non-resistance, Ho Hsiang-ning sent a suit of women's clothing to him as a reproach for his non-resistance.

She was not in good health and depressed by the arrest and imprisonment of her son by the reactionaries. After the fall of Hongkong to the Japanese,



Painting, in her later years.

Ho Hsiang-ning took her large family of grandchildren to Kweilin, Kwangsi, for refuge.

All through this time she would remind the people unceasingly that Sun Yat-sen's principle of land equalization must be carried out to weaken the foundation of feudalism, that his regulation of capital was meant to avoid the road to capitalism, and that when Sun Yat-sen spoke about the Powers, he meant opposition to imperialist aggressors.

Today revolutionary forces to check the war danger are growing and the level of political consciousness of the great majority of the world's people is rising. However, the possibility of a third world war still exists, as our Chairman Mao constantly reminds us. Are the superpowers ever likely to stop their expansionism and contention for world hegemony? Sun Yat-sen's statement on his deathbed about the necessity of uniting with the international revolutionary forces is a warning we must never forget. Even with our people's victory, we must consolidate. Ho Hsiang-ning was deeply conscious of this fact.

When national liberation took place in 1949 under the leadership of the Chinese Communist Party and Chairman Mao and as a result of the united front, Ho Hsiang-ning joyfully left Hongkong for Peking. She realized that the victory of 1949 was not only the victory of the Chinese people but also the victory of the peoples of the entire world.

When the Rightists raised their reactionary heads in 1957 Ho Hsiang-ning fought them with all her strength.

Ho Hsiang-ning's life was outstanding in its fullness and usefulness, and she will live in the memory of the Chinese people, for indeed she had faithfully served them, in her recent capacity also as the Vice-Chairman of the Standing Committee of the National People's Congress, Chairman of the Revolutionary Committee of the Kuomintang, Chairman of the Commission of Overseas Chinese Affairs and Honorary President of the National Women's Federation.

New Developments in China's Foreign Relations

IN the past year there have been great developments in China's foreign relations as a result of carrying out Chairman Mao's revolutionary line in diplomacy in a comprehensive way. China is having more and more friendly exchanges with the peoples of a growing number of countries and regions. Policies aimed at isolating and surrounding her have met with ignominious defeat.

China continues to consolidate and strengthen her fraternal revolutionary unity with such socialist countries as Albania, Korea, Viet Nam and Romania, her militant friendship with all genuine Marxist-Leninist political parties and organizations, and her friendly cooperation with all countries, especially the developing countries. China firmly supports the people of Viet Nam, Laos and Cambodia in their struggle against U.S. aggression and to save their countries and the people of Asia, Africa and Latin America in their just struggles to maintain national independence and defend national sovereignty.

Victory for the Five Principles

With the Five Principles of Peaceful Coexistence as the basis, China has made new and considerable progress in her relations with countries of differing social systems. From January to early November 1972 China established diplomatic relations with Mexico, Argentina, Malta, Mauritius, Greece, Guyana, Togo, Japan, the Federal Republic of Germany, Maldives and Malagasy. Diplomatic relations with Ghana were resumed, and with Britain and the Netherlands the offices of diplomatic representation on both sides were raised from that of *chargé d'affaires* to that of ambassador.

In February 1972 U.S. President Nixon visited China. Leaders of

China and the United States conducted serious, frank and beneficial talks after relations between the two countries had been interrupted for more than 20 years. The door to friendly exchanges between the people of China and the United States has been opened.

In September 1972 Prime Minister Kakuei Tanaka of Japan visited China upon invitation. The joint statement of the two governments declared the abnormal state of affairs between the two countries terminated and diplomatic relations established, thus opening a new chapter in relations between China and Japan.

At the same time government representatives of China and the Federal Republic of Germany successfully concluded talks on establishing diplomatic relations between the two countries. A joint communique on the establishment of diplomatic relations was signed in October 1972 during Foreign Minister Walter Scheel's visit to China. This marked a new beginning in relations between the two countries.

In all, in the first nine months of 1972 China played host to more than 30 official visits, including those of heads of state and government, foreign ministers and other high government officials and government delegations.

Exchanges Between Peoples

People-to-people contacts are increasing all the time. In 1972 more delegations and people from various circles in a greater number of countries and regions visited China than in 1971. It was the same with Chinese visitors abroad. In 1972 more than 500 delegations and individuals from more than 90 countries and regions visited China. During the same period Chinese people from various fields of work

made friendly visits to over 50 countries and regions.

Up to September more than 500 visitors from the United States had come to China in 1972. There had also been a steady stream of visitors from China's close neighbor Japan, totalling at least 3,700 people. The number of travellers to China in the first eight months of 1972 was larger than the figure for the whole year of 1971.

Exchanges in the sports field were more active than ever during 1972. Up to the end of September Chinese table tennis, basketball, volleyball, football, ice hockey and badminton players and skaters and gymnasts had visited 52 countries and regions in Asia, Africa, Latin America and elsewhere. Sixteen countries were visited by Chinese sportsmen for the first time. Some were countries with which China had no diplomatic relations and had had few people-to-people contacts in the past. During the same period sports delegations from 38 countries and regions visited China, nine of them for the first time. The First Asian Table Tennis Championships — when players from 31 countries and regions met for a friendly gathering in Peking in September 1972 — made a new contribution to the friendship and unity between the peoples of China and the other Asian countries.

All these friendly exchanges have promoted mutual understanding, offered opportunities to learn from each other and strengthened friendship and unity. Contacts between the table tennis players of China and the United States opened the door to contact between the Chinese and American peoples which had been closed for more than 20 years, producing enormous repercussions internationally. The phrases "friendship first, competition second" and "a tiny white ball

(Continued on p. 15)



MAN'S WILL, NOT HEAVEN, — **Progress in Flood Control Work**

A virtual army in action to bring the Haiho River under permanent control. The project is the New Chaopai River, a tributary of the Haiho.





The people along the upper and middle reaches of the Yellow River are putting great effort into controlling water loss and soil erosion, as with terraced fields like this in Shensi province.

Formerly broken-down dykes along the lower reaches of the Yellow River in Shantung province were strengthened against flood.

Recently China Reconstructs interviewed a spokesman for the Ministry of Water Conservation and Electric Power on progress in China's water control work. Below are his answers to our questions.

Q. What was the situation in water conservation work when the People's Government took it over after the liberation in 1949?

One could say it was an awful mess. Under the reactionary rule of past feudal dynasties and the Chiang Kai-shek government, China's watercourses had not been dredged or renovated; many dykes had long been in disrepair; floods were frequent and there was no protection against drought; erosion and alkalization of the country's soil were also very serious.

Historical records show that during the two thousand years up to the liberation the Yellow River valley suffered over 1,500 floods and 1,070 droughts. In the 580 years before 1949 the Haiho River valley had 387 floods and 407 droughts. The valley of the Huai River and the land along the middle Yangtze had also frequently suffered from flood and drought. Each big flood or drought always led to great loss of life, sometimes bringing death to hundreds of thousands or even millions and causing tens of millions to lose their homes and face famine.

For more than 20 years the reactionary Chiang Kai-shek government boasted time and again of alleged plans for conducting away the overflow of the Huai River, developing the Yangtze and controlling the Yungting River, a main tributary of the Haiho River in north China. On the pretext of carrying out these schemes, great quantities of government bonds were issued to extort money from the people. The money went into the pockets of high-ranking officials and the plans for water control construction remained nothing but empty talk. No important project was ever built. On the contrary, to preserve itself, the reactionary government even damaged existing water conservation facilities. In 1938 during the war against Japanese aggression, instead of going out to fight the Japanese forces, the Chiang Kai-shek troops blew up the dyke along the Yellow River at Huayuankou near the city of Chengchow in Honan province to cover their retreat. This resulted in flooding 54,000 square kilometers of land in three provinces, bringing disaster to

DECIDES

in Hopei province.





A large key water conservation project now completed on the Yellow River produces electricity.

12,500,000 people, 890,000 of whom died in the flood.

We were faced with huge problems when we began dealing with water conservation work. They had to be tackled one by one according to their importance and urgency.

Q. Will you describe the main steps the People's Government has taken in water conservation?

In the years 1949-1952, while China's economy was being rehabilitated, many dykes broke or gave way and many regions were struck by serious floods. We made the struggle against flood the key point of our work. In less than two years 4,690,000 peasant laborers and 320,000 men from the People's Liberation Army had been mobilized for shock work on building or strengthening dykes. Also in this

period we began our study of the problems of China's main rivers, and through practical experience on the worksites, began to train a corps of cadres for further water conservation work. A few large projects were begun, and some of them were completed. Among them were the Ching River flood diversion project on the middle Yangtze, which can divert and store 5,500 million cubic meters of water, the Paisha Reservoir, the Futzeling Reservoir and the Nanwan Reservoir in the Huai River valley and the Kuanting Reservoir in the Haiho River Valley.

China's First Five-Year Plan for building socialism begun in 1953 pointed out the direction for water conservation work: both permanent and temporary control measures combining control of floods and waterlogging with relief from drought. This plan provided specif-

ically for continuing projects for permanent control of the Huai and strengthening the dykes along the Yangtze. During this period a comprehensive plan was worked out for bringing the Yellow River under control and putting it to use. Research was begun in preparation for work on the Haiho River system.

The collectivization of agriculture — the agricultural producers' cooperatives set up throughout the country in this period — led to a mass movement for construction of irrigation projects. By 1958, the first year of the Second Five-Year Plan, the agricultural cooperatives had developed into people's communes, bigger collectives with a more solid base for providing manpower and materials. The establishment of the people's communes spurred the development of water conservation for farming and enabled projects to be undertaken on a larger scale and in a better organized way.

Collective agriculture has opened up tremendous potentialities for water conservation work, and the Chinese Communist Party and People's Government are making full use of them. Chairman Mao has laid down a whole set of policies for "walking on two legs" in economic construction, one of which is to depend not only on the central government but to bring out the initiative of the localities too. The National Program for Agricultural Development provided full scope for the latter, as well as for the initiative of the broad masses of the peasants, by defining construction of medium and small-sized irrigation works as the main task, but stating that necessary and feasible large-size backbone projects should also be built; it urged that as many as possible of the small projects be constructed by the localities and agricultural cooperatives (later people's communes) in a planned way. By linking these with projects of large and medium size built by the state, after several five-year plans we hope to basically eliminate the possibility of ordinary floods and the consequences of ordinary droughts.

Through following the above principle in the second and third

five-year plans and the present Fourth Five-Year Plan we have been able to make water conservation work not only the task of the central government and localities, but the undertaking of both the cities and rural areas, of the several hundred millions of peasants as well as the workers and technicians, and to fully bring out the initiative of all. In short, in the past 23 years we have always carried out the mass line and the principle of self-reliance as Chairman Mao advocates. Our experience has shown that in a developing country like China, the mass line is the key to achieving the greatest results in construction in the shortest time. I'll say more on this later.

Q. What are the main achievements in water conservation in the past 23 years?

First I want to say something about the work of controlling China's four major rivers—the Yangtze River, the Yellow River, the Huai River and the Haiho River. Let's start with the Huai, the first river for which Chairman Mao issued a directive.

Huai River: This river originates in Honan province in central China and passes through four provinces, Honan, Anhwei, Shantung and Kiangsu. The river valley, with a population of 100 million and 200 million *mu* of farmland, covers 260,000 square kilometers. The peasants in this area describe the situation before liberation with the saying, "A big rain meant a big disaster, a small rain meant a small disaster, and no rain meant drought."

In the 23 years since liberation, working together, the people of the four provinces have built more than 30 large reservoirs and 2,000 medium and small-sized ones in the mountains and hilly areas along the upper and middle reaches. To create outlets for the floodwaters, on the plains along the middle and lower reaches they have dug 13 big watercourses connecting with the Yangtze and the sea. Making use of lakes and low-lying land, they have completed a number of flood storage and flood detention projects. They have also built the giant Pi-Shih-Hang project involving

those three rivers, which can irrigate over 8,000,000 *mu* of farmland, the Chiangtu irrigation and drainage station and several other huge projects. Today the ability to prevent flood, drain areas prone to waterlogging and withstand drought has been greatly strengthened. The flood-draining capacity has increased from the original 8,000 cubic meters per second to 21,000 cubic meters per second. Five times as much land is irrigated as in 1949.

Yellow River: Now let's take the Yellow River.* The harm it used to do is known throughout the world, I don't even have to describe it. Originating in Chinghai province, the Yellow River, 4,800 kilometers long, flows through seven provinces and two autonomous regions before it empties into the sea on the coast of Shantung province. The Yellow River valley covers 745,000 square kilometers. Severe erosion of soil in the loess highlands on the upper and middle reaches used to result in the depositing of over 1,000 million tons of silt a year in the lower reaches. This continually raised the riverbed; on this section of the Yellow River the riverbed was actually

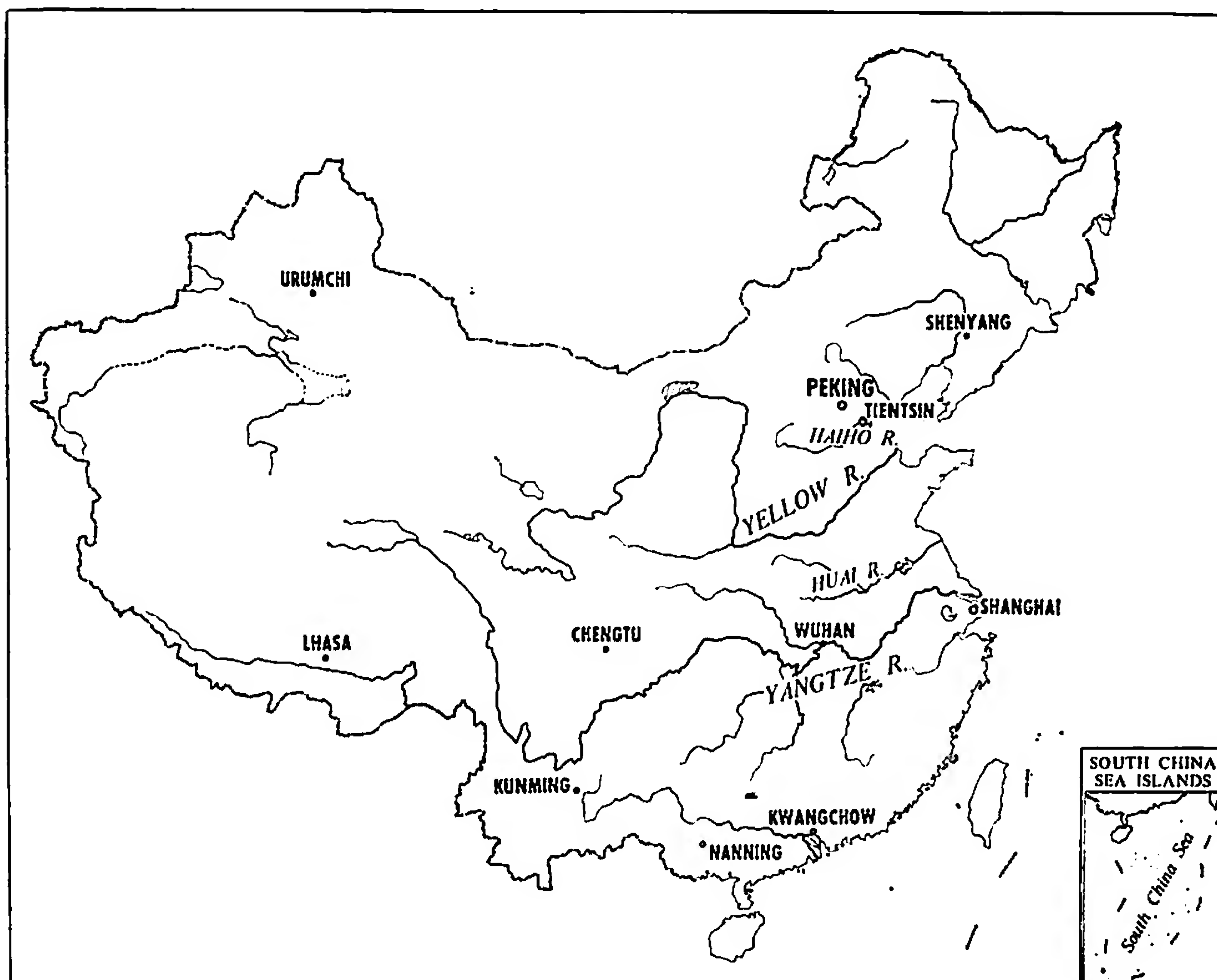
higher than the surrounding land. The river frequently breached the dykes holding it in.

Since liberation all of the 1,800 kilometers of dykes along the lower reaches of the Yellow River have been reinforced and heightened. There has been no breach during the high water season in more than twenty years. Many large and small projects for irrigation and sedimentation are utilizing the silt and water of the river, once the bane of the people, to wash alkali out of the soil and create fields. The people of the loess highlands on the river's upper and middle reaches are now undertaking a sweeping mass movement for water and soil conservation.

In the past no reservoir existed along the river's main waterway or its tributaries. Now there are a number of large key projects for flood storage, irrigation and electric power along the main artery and some 1,000 large, medium and small-sized reservoirs and power stations on the tributaries. These projects have brought more than 48,000,000 *mu* of farmland under irrigation and supply the cities and rural areas with great quantities of electricity.

Haiho River: The Haiho River is the largest water system in north

* See "The Yellow River Today" in the July 1972 issue of *China Reconstructs*.



China. It was also known as a harmful river. The river itself is only some 70 kilometers long, but because of its several hundred tributaries the river valley covers 265,000 square kilometers. The greater part is in Hopei province. In this area heavy rain is concentrated in summer and autumn. During these seasons all the floodwaters from the tributaries rush down into the short and narrow Haiho River seeking a way out to the sea. The river could not take them, and the waters would burst over the plain in floods. Yet, in the spring when there is little rain in Hopei province, the Haiho valley used to suffer from serious droughts.

The work of curbing the Haiho River on a large scale did not begin until 1963. In the past nine years 29 main watercourses have been newly dug or dredged, and several new mouths for floodwaters to empty into the sea have been opened. The capacity for carrying floodwater into the sea has been increased by over five times and that for draining waterlogged areas by more than seven times. In the mountain areas on its upper

reaches 85 large and medium-sized reservoirs and 1,500 small ones (including those completed between 1950 and 1963) were built. Thus, the Haiho River valley is now basically free from the menace of floods and waterlogging. This utilization of ground surface water plus mechanically pumped wells to make use of underground water has enabled Hopei to increase its irrigated area to more than four times that before liberation. This province, which historically was always short of food grains, has now become self-sufficient.

Yangtze: The Yangtze, 5,800 kilometers long, is China's biggest river. It originates in Chinghai province and, flowing through eight provinces and an autonomous region in northwest, southwest, central-south and east China, empties into the East China Sea at Wusungkou outside Shanghai. It drains a basin of 1,800,000 square kilometers. The greater part of the basin has a warm climate, rich water resources and fertile land. But the middle section of the Yangtze, known as the Ching River, used to cause serious floods. This was because the swift current

from the upper reaches slows down as it enters the narrow winding course across the plain and deposits its silt. This has raised the water level a dozen meters above the surrounding land so that the water was a serious menace to the Chiangnan Plain.

The completion of the Ching River flood diversion area in 1952 and the strengthening of the dykes along the Ching brought the flood waters endangering the Chiangnan Plain basically under control. In the two decades since, all the dykes in the Yangtze valley have been reinforced, lakes and waterways brought under control and navigation channels dredged and deepened. Completed water conservation projects include more than 500 reservoirs of all sizes and tens of thousands of small projects for irrigation and the prevention of flood and waterlogging. Construction of water conservation projects in some areas plagued by snail fever (schistosomiasis) was linked with the destruction of the snails. The irrigated area in the middle and lower reaches has expanded from 60 million *mu* soon after liberation to 150 million *mu* today.

An aqueduct on the northern trunk canal of the huge Shaoshan irrigation system, the first such to be built in Hunan province.

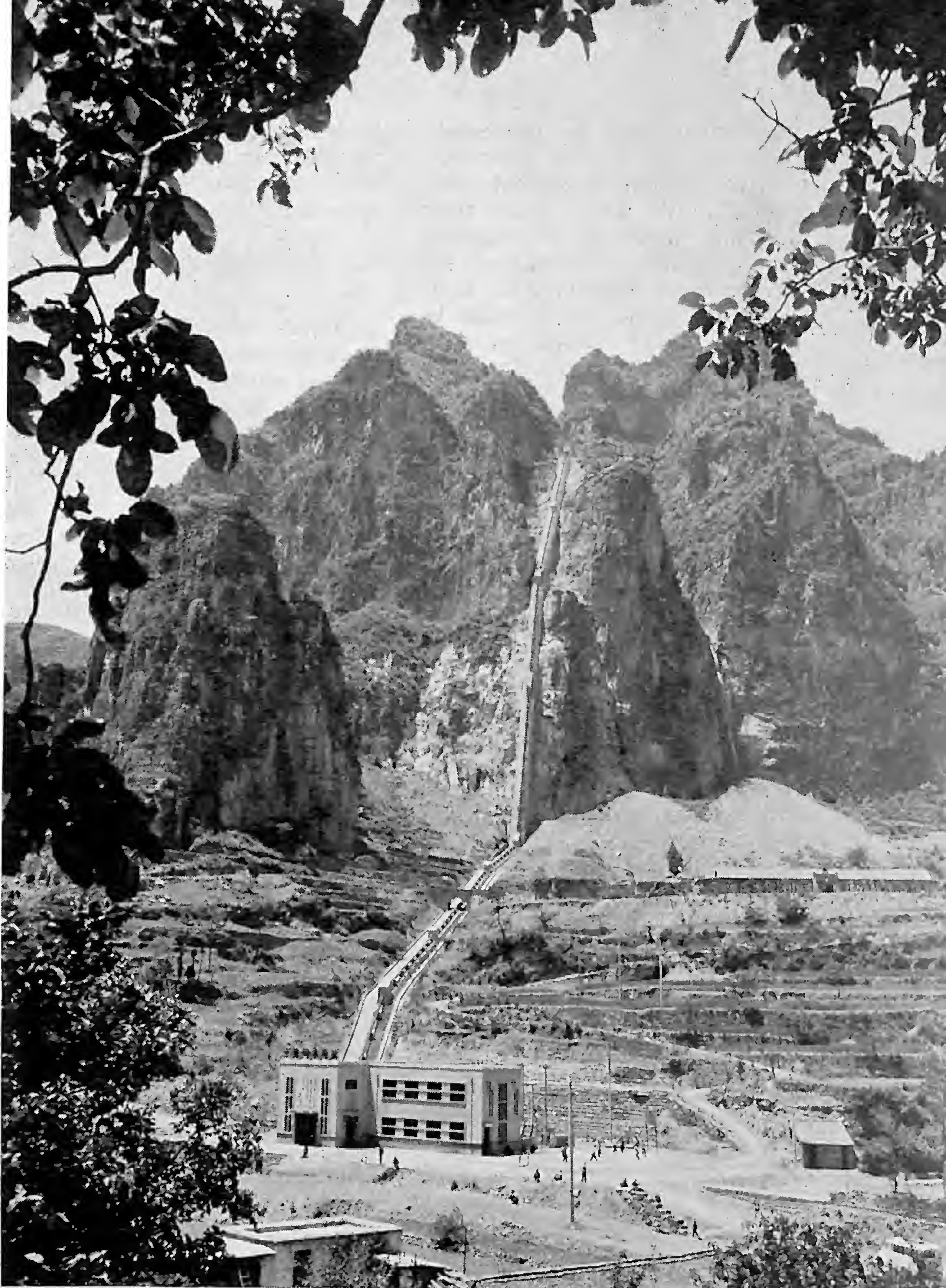


In the course of control work on the big rivers, agricultural collectivization enabled hundreds of thousands of small water conservation projects to be built. In this task, self-reliance, relying on the masses and taking the construction of small projects as the main task were the principles followed. In 1971 commune members of the Yangtze valley completed 5,000 million cubic meters of stone and earth work to make 30 million *mu* of farmland secure against drought and waterlogging.

The projects undertaken by people's communes are planned according to local conditions and serve many purposes. In mountainous areas and on the loess plateau these include planting trees on the hills, growing fodder grass and terracing slopes. Silting is cut down and fields are created by erecting dams across ravines and letting the silt accumulate behind them. The people also build small reservoirs and ponds for storing water and dig ditches to bring water from other sources. These multi-purpose projects, in addition to conserving water and soil, aid the development of farming, forestry, livestock breeding, sideline production and fishery.

In the plains river control work is accompanied by the building of irrigation and drainage systems. Where the soil is heavily saline or alkaline, ways are found to run water through the fields to gradually wash out the alkali. Platform and strip fields are used. Where long dry spells often occur, work centers around digging wells and installing pumps to make use of underground water.

Today there are 1,700 reservoirs of large and medium size located in China's mountainous and hilly areas, and small ones by the tens of thousands. In the major river basins there are 130,000 kilometers of dykes, newly-built or strengthened, and close to 100 big canals for draining away floodwater. Throughout the country equipment with a total of 20 million horsepower is in use in electric irrigation and drainage stations. Wells with pumps have exceeded 900,000 in number. About half of the land in



The Shihliho hydro-power station in the Taihang Mountains, Shansi province, will produce electricity utilizing water from a spring brought through a 3.5-kilometer ditch and over a 327-meter-high mountain.

saline and alkaline areas has been improved.

All this work has increased our ability to overcome floods, waterlogging and drought, and consequently expanded our agricultural production.

Q. What are the main factors contributing to these achievements?

The most important factor is the nature of China's political power and social system. Under the leadership of the Chinese Communist Party and Chairman Mao,

our political power represents the interests of the working people. The People's Government regards water conservation as important for developing the economy, raising industrial and agricultural production and improving the life of the people.

Since liberation Chairman Mao has made several inspection tours of the Yangtze, the Yellow River and other major rivers and personally indicated the tasks for water control. When the Huai River rose in flood in 1950 Chairman Mao gave the instruction that "the

Huai River must be harnessed". Later he issued the directives: **"Strive for the successful completion of the Ching River flood diversion project in the interests of the people", "Work on the Yellow River must be done well"** and **"The Haiho River must be brought under permanent control."** These have inspired the people to surmount every difficulty in their fight to conquer nature.

Special organizations have been set up to draw up plans and lead the work for control of the Yangtze, Yellow, Huai and Haiho rivers. The government appropriates a large amount of money for water conservation every year. Already 8,000 million yuan has been spent on the Yellow and Huai rivers.

China is a socialist country and the state controls the economy. The land in the countryside is owned collectively by people's communes. This makes it possible to plan and make arrangements in a unified way. The Huai River project, for example, gives unified leadership to work in all four provinces that the river passes through. It coordinates the socialist cooperative efforts of the provinces, counties and communes in supplying manpower and materials.

Under a unified plan for developing the socialist economy, rolled steel, cement, machinery and equipment for water conservation work can be produced according to plan. Although China's industrial foundation is still not highly developed, it provides water conservation with great quantities of rolled steel, cement, electric motors and transmission lines.

The mass line advocated by Chairman Mao has played a decisive role in water conservation achievements. A fundamental line for the work of the Chinese Communist Party, it brings the people's initiative and spirit of self-reliance and hard work into full play for building socialism.

The control of the Haiho River is a good example of the mass line in action. Two-thirds of Hopei province lies in the Haiho River basin. Every winter and spring for the past nine years 300,000 to 400,000 people in this province have come out to work on various

projects. Commune members make up the main force; others include workers, cadres and technicians. Several million others have worked on reservoirs, canals, pump wells and improving saline and alkaline soil.

China's industry is not yet able to supply all the machinery needed for this countrywide effort to control the rivers. In the work going on at the Haiho, physical labor — digging with spades and transporting earth with hand carts — is still the main form of labor. Then, too, a major part of the work is done in winter and early spring when the ground is frozen so hard that it has to be cracked with sledge hammers. Blizzards, tidal waves and earthquakes have more than once held up or set back the progress of work. Yet, the people's dedication to building socialism has moved them to give their best. The earthwork involved in dredging waterways, building dykes and other channels, came to 1,900 million cubic meters, equivalent to digging five Suez canals. In addition, commune members, with the help of workers and technicians, have put up 50,000 complementary structures — bridges, waterlocks, dams and culverts.

Scenes like those on the Haiho worksite can be found all over the country during winter and spring. We estimate that several tens of millions of people take part every year.

Q. What kind of difficulties has China had to overcome in water conservation? What major problems lie ahead?

Like everything else, the achievements of water conservation did not come easily. First of all there is the struggle over what line to follow in water conservation. This is inseparable from the struggle over the ideological and political line during the entire period of building socialism. At the same time that the masses of the people were following Chairman Mao in building socialism, a small number of class enemies who had wormed their way into the Party and usurped a portion of the power tried to destroy our socialist achievements. In economic construction they were against Chair-

man Mao's line of relying on the masses and his policies of self-reliance and "walking on two legs". These people wanted to build nothing but big projects. They stressed the role of only a small number of specialists, which is quite different from giving full scope to the initiative of specialists and technicians; they set little store by the initiative and creativity of the masses of the people. They were for each locality undertaking its water conservation projects individually and opposed unified effort and socialist cooperation. As a result of their influence, for a time some of our water projects went off on the wrong track. But their counter-revolutionary nature was exposed to the full during the cultural revolution.

The battle to make China permanently free from flood and the consequence of drought and to put her water resources to full use is a long, hard struggle. Due to lack of experience, there have been some mistakes in our work. China is very big and her terrain is complicated. There is a great difference in water resources in the north and in the south. Water work does not proceed at the same rate all over. We must set our targets higher. And, there are many specific problems to be solved. One is to make use of underground water in the north, probably the permanent solution to the problem of insufficient water resources above ground. Another is the conservation of water and soil on the upper and middle reaches of the Yellow River in order to end silting. As for putting our abundant water resources to use, we have only just begun to do that.

We have a long way to go in our fight to conquer nature and turn water from a menace into a benefit for the people. But what we have done in the past 23 years has shown us the power of the socialist collective. For a long time the Chinese people were dominated by the feudal and idealist idea that man can only abide by the will of heaven. This, no more. Today our motto is "Man's will, not heaven, decides", our ambition is to make socialism a full reality in China.

15 mu = 1 hectare (6 mu = 1 acre)

(Continued from p. 7)

conveys friendship" have since been taken up all around the world.

Trade and Economic Relations

A part of the Third World, China has established new international economic relations and is carrying on economic and technical cooperation with other developing countries on the basis of equality, mutual benefit and mutual support. While this mutual help and cooperation is still on a limited scale, its scope is expanding all the time, involving a gradually-increasing number of items and continually rising technological demands.

China actively develops trade with all countries in line with the principle of equality, mutual benefit and mutual help to make up what the other lacks. At present China has trade relations with more than 130 countries and regions. In the first nine months of 1972 she sent 24 trade delegations and representatives to 21 countries and regions, and played host to 84 economic and trade delegations and individuals from 30 countries and regions. She signed trade agreements or protocols with 26 countries. Her total volume of trade made a considerable increase over that for 1971.

China's ocean-going vessels now call at the ports of 61 countries and regions on five continents.

A record-high number of visitors from more countries and regions than ever gathered at the export commodities fair at Kwangchow in the autumn of 1972. The volume of trade agreements concluded there, too, was the biggest-ever in the history of the fair.

In 1972 China held or took part in a number of economic and trade exhibitions abroad. Several foreign countries also put up exhibitions in China. These provided fine opportunities for trade, exchange of experience, learning from each other and the development of friendship.

Ho Hsiang-ning — in Memoriam

One of China's great women,
ever loyal to her people,
working on devotedly after killers
had struck down her husband;
bringing up her children to fight
for the revolution to which
she gave her heart so fully.

And on a Peking afternoon
when even the clouds were weeping,
their tears falling in heavy drops
outside the quiet room where
she lay, so strong in face, so
beautiful in her last appearance
in beautiful Peking, with something
of the strength of the tigers
she once loved to paint; then, too,
of the chrysanthemums and plum blossoms
standing bravely in the face of frost and snow
that came so deftly from her brush.

Out into the evening
I went from that last farewell
and then on the street came running
a bunch of youngsters from some ball games,
shirts off, faces laughingly turned upward into
the warm summer rain that now pelted down,
these the well-fed, well-cared-for,
who can struggle with an ever better
chance for victory because she
and her kind fought so long
and so gallantly for them and their day.

So, now, with work well done
may you rest in peace, leaving
your memory a fine and lovely thing
Ho Hsiang-ning.

— Rewi Alley



Winter traffic on the highway through the Tianshan Mountains.

KEEPING THE ROAD OPEN IN SNOW

The rich grassland, forest and mineral resources of the Tianshan Mountains in China's northwest were a good reason for developing the economy and building a highway there. But in the 3,000-meter-above-sea-level mountain passes the road was frequently blocked through the winter and spring by snowdrifts two meters deep, and sometimes up to five or six meters. Some sections of the road were impassable from October to April. In recent years a special team sent by the Kansu Province Research Institute for Glaciers, Frozen Earth and Deserts, a unit under the Chinese Academy of Sciences, has been making investigations with the aim of solving this problem. Following are extracts from the work-diary of Su Chen, a researcher with the group.

September 20, 1971. Tomorrow our team of ten will leave Lanchow for Urumchi and from there go to the Tianshan Mountains to begin our fifth year of investigation into the problem of drifting snow on the highway. Since we began in 1967 we have acquired a basic understanding of the way the snow drifts in some sections. This time, in addition to surveying the remaining sections, we are going to figure out measures for preventing the drifts.

September 29, 1971. We have been working in the Tianshans for four days. Researchers from the Sinkiang communications bureau, seismograph unit and weather bureau have joined us to form a special team to tackle the drift-prevention problem. To learn about the conditions of snow-blockage in this area in the past,

we have been trudging across the mountains to talk to highway maintenance crews and communes along the road. We also went some scores of kilometers to forest farms and grazing areas.

Today I talked with Hu Hsinting, leader of a highway maintenance crew, and some of the crew members. He said that the highway had been blocked by snow every year since it was opened to traffic. The year 1966 had been particularly bad; snow fell in December for two weeks straight. The whole world seemed to be nothing but a sheet of silver, he said. Some of the slopes were so drifted-over that you couldn't see the road at all. The highway maintenance crews had just been set up. They had only a few snow ploughs and very little other equipment, so they couldn't cope

with all that snow. Traffic had to stop for several months. When the Communist Party and government learned about it they brought in food and other supplies by air for the people who were cut off from the outside. At the same time shock teams came from many places to help open the road again.

As he was telling this, an Uighur worker broke in and told the story of his family. They had lived in the Tianshans for generations. In the old society his father had supported the family by grazing sheep for a herdowner. The winter he was ten, one day when his father was out with the sheep he ran into drifting snow. The sheep scattered in all directions. His father fell into a snow-filled hole and froze to death. He went on to say how happy he has been since the liberation, and since the

government built the highway so that all kinds of goods needed by the herdsmen and peasants could be brought in.

October 8, 1971. We're working hard to get everything ready before the snow gets deep. Only a few people have been out on investigation. Most of the others are busy setting up the instruments at the observation sites. We also have to survey and make a topographical map so that when the snow begins to drift we can accurately record the position of drifts. Surveying calls for a lot of people, but we are already short-handed. The heavy snows will begin very soon.

At first we didn't know what we were going to do. Then we discussed our problem with workers from the highway maintenance crew. When they learned that we were having trouble getting all the surveying done, Keng An-chih, the crew leader, said, "Your work is also our work. We're all working together to keep the road open." Many of the crew members joined us to help with the surveying and this speeded it up a great deal. We think that by the time the snow comes we'll be ready for it.

October 26, 1971. The weather has been abnormal since yesterday afternoon. The west wind is howling, and at 9 a.m. the sky was still dark. When I opened the door the wind blew in such a flurry of snow that I could hardly keep my eyes open. However, this snowfall before the snow accumulates provides us with a good chance to study how the drifts pile up and the effect on the highway.

After lunch we set out in two groups with our instruments. The snow was driven by gale-force winds and we could only make out things two meters ahead of us. Our group of three was responsible for surveying a dozen kilometers of road near our billet. One of us recorded the direction of the wind and its speed, while the other two

noted the places where the highway was drifted over, and the density of the drifts. The farther we walked the deeper the drifts got, and finally where the snow was deepest we just had to flounder through it. It was dark before we finished our task, but we gathered some valuable first-hand information. The other group also finished its task with flying colors.

November 12, 1971. In order to find the laws of the drifting snow we have to spend a lot of time working out in the snowstorms.



Surveying

Weighing a snow core to determine density of snow in a drift.



A local man tells of snow conditions in past years.

The bigger the snowstorm the better opportunity it affords us for learning.

Today Lao Liu and Hsiao Wang went out in the morning and when it got dark they still weren't back. The wind was howling outside and at the highway maintenance crew's house where we live the snow was drifted so high in front of the door that we could hardly open it. We were worried, so after supper another comrade and I went out to look for them. In some places great snowbanks lay across the highway. One false step could land us in a snow-filled hole two meters deep. Grains of snow like flying sand forced us to cover



Wind-deflection panels along the highway.

our faces. We could hardly stand up and sometimes had to walk backward. We staggered on for about three hours and finally spotted Lao Liu and Hsiao Wang. They were working in a snowbank up to their waists. We urged them to quit for the day, but they said, "This is the last profile to be measured. Let's finish it off before we go back."

It was very late when we got done. On our way back we ran into some members of the maintenance crew who had come out to look for us.

December 3, 1971. Our surveys of the snow conditions, measurement of the flow fields and search for the laws of drifting snow, work done both in the past and this winter, have yielded a lot of valuable data.

In the areas of drift the snow will not pile up during a blizzard, but when wind speed is less than 4-6 meters per second, falling snow will accumulate. Here in the mountains the terrain greatly affects wind speed. There are three kinds of terrain where the speed drops sharply: on upgrades, downgrades and curves, so these are the places of greatest accumulation. We classified the drifts into three basic types according to the

terrain: those caused by blockage on the windward side of a slope, those deposited on the leeward side of a slope and snow that piles up around level curves.

Now that we have the basic laws of drifting snow in hand, we have begun our research on ways to control it. At today's discussion we came to the conclusion that the main thing to tackle is the wind. We decided on two ways: one is to keep the snow from crossing the highway, the other is to create conditions that do not allow the drifts to pile up, either by altering the direction of the wind or by increasing its speed. We worked out a dozen different methods on which we intend to carry out field tests and simulation experiments in our wind tunnel laboratory.

December 17, 1971. We have begun the field tests. With the help of the maintenance crew we spent about 10 days building an 80-meter-long line of wind-deflection panels on the windward side of the highway. They are between 5 and 6 meters high and stand on posts about a meter off the ground. The opening at the bottom increases the speed of the wind and alters its direction. We have had several snowstorms in the past few days. Our first test panels

stood up to the wind and worked. All along the road the drift stretches were covered with snow to a depth of three or four meters, but the places where we had our wind-deflection panels were clear. These good results from our first trial project will speed up other projects.

March 13, 1972. We have put up many test projects in the past few months. Today our six-man group went out to survey the wind velocity profiles of the last few test projects. The wind kept getting stronger and stronger, up to more than 20 meters per second, and the temperature was dropping rapidly. In spite of the weather we slogged ahead, measuring the wind velocity at all the trial projects along a dozen-kilometer stretch. We collected data on the flow field profiles of the various types of projects, which will give us an idea of how to improve them.

June 23, 1972. Almost all of our test projects have proved successful. They brought good results in preventing drifting. Our analysis of these tests and observation of the flow fields of the roadway has given us a fairly good idea of the applicability, technical requirements and effectiveness in relation to economy, of the various drift-prevention measures. Then we drew up a set of general principles for keeping the highway which puts the emphasis on prevention — through wind deflection, blocking of the snow and improvement of road surfaces and embankments — and takes snow-clearance by mechanical means as a secondary measure.

We finally finished the preliminary designs for engineering work over the entire length of the highway in accordance with these principles and the standards of the local communications bureau. Today our whole team checked over the designs. Everybody looked at each blueprint and then we discussed whether the type of project for each section, and its arrangement and structure, was suitable. Our work is not over. We still have more theoretical work to do.

TUNHUANG DEFEATS THE SAND

China Reconstructs Correspondent



The people of Tunhuang have recovered their original farmland from the sand and expanded it by over 50,000 *mu*.

The Mingshan brigade members transport earth to create fields.

SURROUNDED on three sides by stony gobi areas and on the fourth by sand dunes, Tunhuang county in Kansu province has always suffered from severe sandstorms. Yet, historical records show it to have been a fertile oasis during the Han (206 B.C. -A.D. 220) and Tang (618-907) dynasties. It was an important stopover on the famous Silk Road, the path for China's contacts with the West in ancient times. Later, encroaching sand and devastation through years of war desolated large farming areas. The fields were gradually buried beneath the sand. By the liberation in 1949 the population remaining in Tunhuang county numbered only in the tens of thousands. The two small towns which had been prosperous in ancient times had been completely drowned by the sea of sand.





The new canal through the desert area carries water from the Tang River to fields all over the county.

When we visited the countryside around Tunhuang last summer we found that the scene had changed completely. The fields of the people's communes are protected by dense shelter belts of luxuriant poplars; canals and ditches connecting with the Tang River irrigate them with water of the melting snow from the Chilen Mountains; autumn stands of cotton, maize and millet were growing well; on the threshing ground the wheat was stacked and the people were busy threshing.

People vs. Sand

We arrived at the Mingshan brigade of the Yangchiachiao commune, not far from the county town. The 110-household brigade is surrounded by greenery, though the area to the south is occupied by sandy Mingsha Hill and that to the east and north by sand dunes and a

stretch of gobi. The trees were bending down with peaches and pears, and amid the greenery huge Chinese dates stood out as bright flashes of red.

Liu Chuan-li, secretary of the brigade Communist Party branch, led us across cotton fields and orchards to a sand dune on the fringe of the shelter belts. There he gave us an account of how the commune members had struggled against the sand to change the look of their native place. Early in 1958, when the commune was set up, they began afforestation to control the sand. The battle did not start on a large scale, however, until 1964 when the brigade launched a mass movement to do things in the spirit of self-reliance and hard struggle of the Tachai brigade in Shansi province, a pacesetter in China's agriculture. (See "The Path of Tachai" in the August 1972 issue of *China Reconstructs*.)

They decided to begin at Chenghuangmiao, where the winds were the strongest. When a gale swept the area, waves of shifting sand would surge forward. The commune members cut through the huge ridges of sand to build canals, and planted trees. Often as they dug a canal the wind would fill it up with sand right behind them. They brought in great quantities of thornbushes from 25 kilometers away and planted them close together along the banks of the canal to stabilize the sand. Seven days of round-the-clock work in shifts gave them a canal to bring water from the Tang River.

Along with creating branch channels, they carried out afforestation. Working in this way for eight years, the brigade cut through seven huge sandy ridges, levelled more than 80 big sand dunes and numerous small ones and planted 33 sand-breaks total-

ling 35 kilometers in length. In addition they set out fruit trees and created forests over 500 *mu* of land. They reclaimed 600 *mu* of farmland which had been buried by sand. This once poverty-stricken area now is a big producer of grain, cotton and fruit.

Next we went to Nanhu commune, located 75 kilometers from the county seat in a small oasis on the edge of the Taklamakan Desert. It has built 5 kilometers of ditches, enabling it to bring over 1,000 *mu* of land under irrigation, and also has set up a small hydro-electric power station. On 5,000 *mu* of land the commune's 200-worker forest farm has set out 2,800,000 trees — an average of 13,000 trees per person. The four brigades under the commune also have forest farms of their own. Altogether more than 10,000 *mu* have been afforested. A 15-kilometer-long forest belt breaks the force of the wind from the north. Interspersed among the greenery are strips of farmland.

In the last eight years Tunhuang county's communes have afforested a total of 70,000 *mu* of land along a 100-kilometer line which had been most subject to sandstorms. The fields are protected by four main shelter belts. The county has expanded its area under cultivation by more than 50,000 *mu*. It can now supply the state with 300,000 yuan worth of timber and fruit a year. The people of Tunhuang, once driven away by the sand, have now forced their enemy to retreat.

Solving the Water Problem

Tunhuang is known as an arid area. Annual rainfall averages less than 30 millimeters. The only source of water for farming is the Tang River, which is fed by melting snow from the Chilien Mountains. Following the liberation, after the canals were built and the river dredged and deepened, the volume of water was not enough to meet the needs of farming and afforestation.

In recent years the leading comrades in the county personally led commune members and cadres from the county, communes and brigades in three expeditions to search for water sources in the Chilien Mountains, 200 kilometers from the county town. Carrying their tents and food supply, they climbed mountains, they went deep into the 18 main ravines on the upper reaches of the Tang River and surveyed them one by one. They also sought the advice of the old herdsmen. In 1969 they discovered two fairly big springs in the mountains.

Early in the spring of 1970, when farm work was slack, 500 strong commune members climbed the ice-bound Chilien slopes to begin their battle to transform nature. In the 20° below zero (C) cold the springs were covered with ice three meters thick. The crews broke the ice, cleared away the undergrowth, dug sand, removed rocks and then built canals with regulating dams ready to conduct the water to the Tang River when the thaw came.

Now augmented by water from the springs, Tang River irrigates 180,000 *mu* of farmland through 1,700 canals and ditches with a total length of over 1,000 kilometers. In its course from the mountains to Tunhuang the river flows through large stretches of desert. Few canals existed before libera-

tion and most ran through sand. A lot of water seeped away into the earth. The commune members have lined most of the canals, renovated as well as new, with pebbles and a layer of sod, basically solving the seepage problem.

In 1971 Tunhuang had the greatest drought in its history, but due to the irrigation projects, good management of the water supply and the afforestation, the county still got a good harvest. The average yield per *mu* was more than twice that in 1964 before the mass movement to learn from Tachai. In the past only one crop a year had been grown in this area, but during the last two years two crops have been harvested over large areas. Land under cotton has been continuously expanded. Today the per-*mu* yield is twice as much and total production nine times as much as before liberation. Along with agriculture and forestry, stock-raising is also developing.

Old Tunhuang had only a few workshops where production was carried on by handicraft methods. Now the county has set up eight factories and mines, including a farm machinery repair and manufacturing works, a cotton gin, and a phosphate fertilizer plant. The total value of industrial production accounts for 34 percent of the county's total income.

15 *mu*=1 hectare (6 *mu*=1 acre)

A good harvest of melons in the Chuanchu commune.



Oil Bases in the Desert

Staff Reporter

WE SET OUT by bus from Tunhuang county in Kansu province last autumn and ascended the Tangchin Pass, 3,600 meters above sea level.

"We're in the Tsaidam Basin!" someone exclaimed. From the bus windows could be seen an unbroken chain of high mountains on either side, their snowcapped peaks shining in the sunlight. Ahead lay a vast expanse of sand and gravel—the desert.

Located in northwestern Chinghai province, the Tsaidam Basin is one of China's three great inland basins. Enclosed by the Kunlun and Chilien mountains with their perpetual snows, the 300,000-square-kilometer floor of the basin lies at 2,500-3,000 meters above sea level.

"There are rich resources of oil, lead, zinc, coal, iron and salt buried under these mountains and desert," an oilworker on the bus told us. "Many factories and towns have been built in the desert in a little more than a decade. The biggest enterprises are the Lenghu oilfield and another oil base in the western part of the basin."

During the six-hour trip from Tangchin Pass to Lenghu we encountered only a few road workers along the way. At times a lake, the inverted images of trees and houses on its banks and distant mountains reflected on its shimmering surface, would suddenly appear not far off, only to disappear again. These were mirages, often seen in the desert.

New City in the Desert

Throughout history people have used the phrases "800 *li* of uninhabited desert" and "neither birds in the sky nor grass on the ground" to describe the vastness and barrenness of the Tsaidam Basin.

Lenghu is nothing like that. The red iron roofs amid rolling sand dunes to the north were the buildings of the machine repair plant and warehouse. To the south were the power plant, oil refinery and a forest of well-head frames. A central cluster of buildings housed the revolutionary committee and other administrative offices, petroleum research institute, cultural palace, schools, hospital, kindergarten, hostel, stores and other services. There also was the terminal for public buses to points north and south.

The Lenghu petroleum administration told us that a geological prospecting team had done many

years of survey work and drilled the first gusher here in 1958. Because of the great pressure in the oil-bearing layer, within a few days a depression below the slope had become a lake of oil.

The call went out to get this oil field into production.

Cadres, technicians and workers from all over China came to Lenghu. They pitched their tents and built makeshift cookstoves in the desert and began the battle to open up the new oilfield.

The climate here is not good. Thirty-meter-per-second winds and temperatures of 20°-30° below (C)

The Lenghu oil field.



are common. Yearly rainfall is less than 100 millimeters, the same as that in Africa's Sahara Desert. At times raindrops evaporate in the dry air before reaching the ground. Water sources were scarce.

There were no roads at that time. Transport was mainly by camel, making it difficult to provide a regular supply of things needed for everyday living. Everyone had a ration of steamed rolls, but there were no fresh vegetables, and the water ration was less than two cups a day per person.

These difficulties didn't deter the heroic builders. Every minute meant oil that much sooner; they worked to get the field producing as fast as possible. Lacking machinery, they themselves made a hoist to aid in setting up a refining tower. The installation of accessory equipment was quickly completed. One well head frame after another poked up towards the sky.

A decade of construction has made Lenghu into one of the oil

bases of China's northwest. Today the gasoline refined here, in addition to supplying the Tsaidam Basin itself, goes to other provinces and autonomous regions.

Plants serving the petroleum industry have been built to produce acid, fiberboard, grey brick, lime, cement and carbide. Serving the workers are a tailor shop and shops making soy sauce, vinegar and bean noodles. This has altered the complete reliance on supplies from outside.

Where water was once so scarce, today a 40-kilometer pipeline provides water for industry and other uses. It has made farming possible where none was done before. There is a network of roads. The highway over the Tangchin Pass to Liuyuan in Kansu on the Lanchow-Sinkiang rail line is China's longest asphalt road in a desert area. The trucks shuttling back and forth over it show that the era of the camel caravan has ended. Lenghu has developed into a new oil city of over 2,000 families.

Enlarging the Oilfield

"If we hadn't endured hardships, Tsaidam wouldn't have changed," Yen Ching-yung, a veteran prospector now head of the seismograph crews told us. "If we don't face up to the present hardships, there will be no happy future."

Finding Yen Ching-yung wasn't easy. Our landrover bumped across the sand dunes for two hours before we found him at a drill rig beside a salt marsh. He told us about the crew's work.

"We've already drilled six shot holes and the other six won't take long. We'll be able to fire these shots by five o'clock, and our instrument truck will get the geological data on this survey line. Now our battle is to enlarge the oilfield," he observed, taking in the vast area with a sweep of his arm.

Yen Ching-yung comes from a former hired hand's family in Tunhuang, Kansu. Although only 37, he is considered an old-timer in the Tsaidam Basin because he has lived there ever since development started. As a poor youth in the old society he had spent six years herding sheep for a landlord in a desert area. In 1954, the second year of China's First Five-Year Plan, he heard his village leaders say that the People's Government was to open up the Tsaidam Basin. At once he asked to go. Not long after, he entered the basin along with the first geological survey brigade.

The prospectors have many stories to tell about Yen Ching-yung. He had not been there long when he set out alone from the base camp leading a string of camels with instruments, food and water for a surveying team operating 200 kilometers away. There was neither man nor road in the vast expanse of desert and the weather was subject to sudden changes. Under the noon sun, the air was hot and dry and the sand scorching, at night he felt cold wrapped in a fur overcoat.

On the fourth day of Yen Ching-yung's trek a whistling wind suddenly rose. Flying sand darkened the sky and he lost his way in a



OIL BASES IN THE DESERT

A section of the new oil base in the western part of the Tsaidam Basin.



Making every minute count for socialism





Making a road and levelling a drill site.



Return at the end of a day.



crescent of sand dunes. He knew the surveyors were waiting for these instruments, food and water. "As long as I've got a breath in my body," he thought to himself, "I'll get to them." Counting on his experience from his sheep-herding days, he kept going through the night.

Just before dawn he saw light up ahead. He made for it like a shot, pulling the camels behind him. The surveying team had hung a storm lantern on a surveyor's pole to guide him. When they saw him, they ran toward him with shouts.

Yen Ching-yung and the geological prospectors have been practi-

cally everywhere in the desert. The first year, 1954, they surveyed the distribution of oil-bearing Tertiary rock, discovering 17 structures favorable for the accumulation of oil, and 9 seepages. By 1959 they had found over 100 such structures, and some oil and natural gas fields of industrial value.

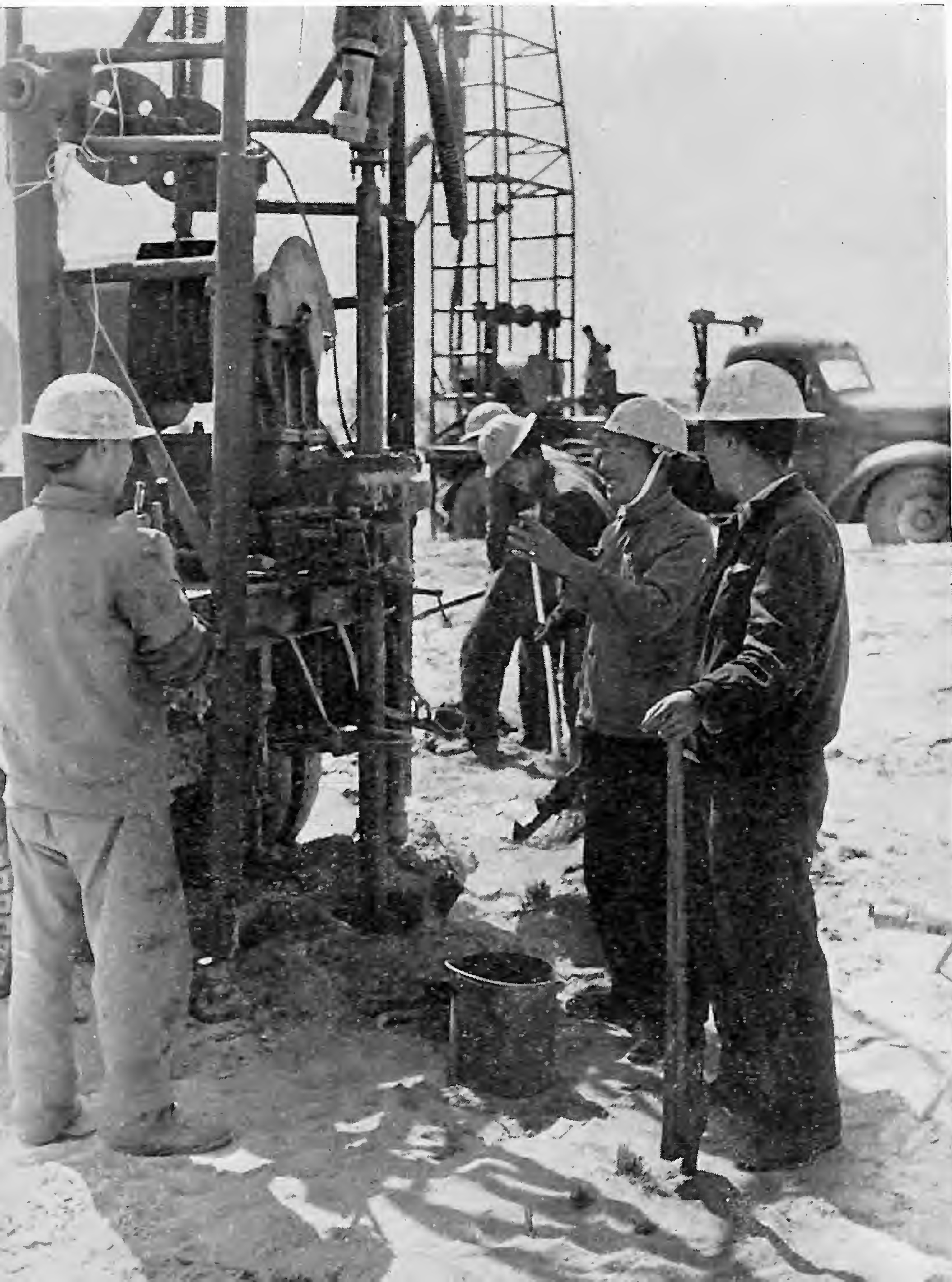
Now one of the leaders of the Chinghai petroleum administration's geology department, Yen Ching-yung is responsible for directing the work of 10 seismograph crews. He is still the same as he was when he first came to the Tsaidam Basin and life was at its ruggedest, regularly working on the site with the prospectors.

Rebirth of Old Wells

Lenghu's strata are complex, and extracting crude oil is no easy matter. The No. 2 extracting team, with 50 workers in eight extracting crews, made a deep impression on us.

Team leader Wang Chao-ping led us across several sand dunes to a head frame. "This gusher went into operation on August 13, 1958," he said, pointing to the well. "There are almost a hundred wells around here, all completed about that time. They all began as high-production gushers. Later, production dropped sharply and some wells became filled with sand or water. There

Yen Ching-yung (second from right) at work with a seismograph crew.



One of the women workers in the Lenghu Refinery.



were those who said that all the crude oil had been extracted and nothing more could be got out of the wells. We didn't agree."

Not long after, he related, a data group composed of cadres, workers and technicians was set up. They visited all of the team's 67 well sites to survey production and analyzed large quantities of data on the drilling, testing and production history of each well. Every member of the team began making round-the-clock observation of oil pressure in order to find the laws governing output.

The survey showed that because the district had been exploited for some time, the pressure in the oil-bearing layers had dropped and sand had collapsed into the wells, blocking the oil flow. Their in-



A prospecting team sets out to search for more oilfields.

vestigations also revealed previously undiscovered oil-bearing layers.

With the situation clear, everyone's resolve was strengthened. Measures for increasing production were worked out for one well after another.

The daily oil production of one of the team's wells had dropped to 0.2 ton. Hsieh Po-jung and other workers in charge of the well made analyses involving over 1,000 figures and discovered a new oil-bearing layer over five meters thick. With the help of the data group they perforated this layer. Sure enough, crude oil poured out of the well. Later they cleaned the sand out of the well and changed the choke controlling pressure in the well. Since then production has been stable at about 5 tons a day.

The workers of the No. 2 extracting team keep searching for oil-bearing layers and doing other things to increase output, all of which has transformed production in the district. High-yielding wells are putting out even more. Some wells that were sending up water

are again producing oil. Wells considered dead for seven or eight years are back in production again. For the last two years the team has overfulfilled its quota and output is still increasing steadily.

The pioneering work of the No. 2 extracting team set an example for the rest of the oilfield. Other extracting teams started reanalyzing the oil-bearing layers of the Lenghu field. They found new oil-bearing layers and took measures to increase production and tap the potential of old wells. The old wells were restored to life and crude oil production increased greatly.

We kept hearing good news everywhere we went in Lenghu. Not only the geological prospecting and oil extracting units but the drilling and refining units have also overfulfilled the plan set for them by the state.

Thriving West

The pioneers of the Tsaidam Basin were not satisfied with their achievements at Lenghu. Starting in March 1969, in a year and a half

they set up a new oil base in the western portion of the basin. It presents an impressive scene with the head frames atop North and South mountains towering into the clouds and clusters of oil storage tanks all around.

On top of North Mountain, 3,200 meters above sea level, we found drill team No. 3288. The workers were lowering length after length of casing pipe into the well.

In this district of high mountains with steep slopes and cliffs it was once considered possible to drill only in the ravines. Deciding it was feasible to drill on the slopes, to bring in equipment the crews built a road that winds for several dozen kilometers among the mountains. They cut through mountains, levelled peaks and filled in ravines, then brought in over 100 tons of drilling equipment and quickly completed a well.

Tai Kang, political instructor of the drill team, came over from the drilling platform in his greasy work-clothes to greet us. "This is the ninth well we've drilled since coming west," he said. "We'll cement it today."

As we talked with Tai Kang, the drillers finished lowering the casing. One of them hung up a sign reading "CEMENTING". The two cement trucks standing beside the well started up with a rumble and began injecting several dozen tons of cement to form the well wall.

"This well will be finished soon," Tai Kang said. "We'll take down the drill rig tonight and move over to the peak opposite tomorrow to begin a new well."

Sounds of blasting came from North and South mountains and they were shrouded in smoke and dust. As we descended, we saw men making a road around the mountains and levelling off a drill site with the help of bulldozers. Along the completed section of the road trucks were bringing equipment and water to the worksite. From wells in the ravine black crude oil was flowing in an unbroken stream into storage tanks. At the foot of South Mountain a small oil refinery built in just 75 days was working away.



Perfecting a stance on the tightwire.
Spinning a jar with the feet.



Cycling practice.



Sudanese Study Acrobatics in China

WO YUAN

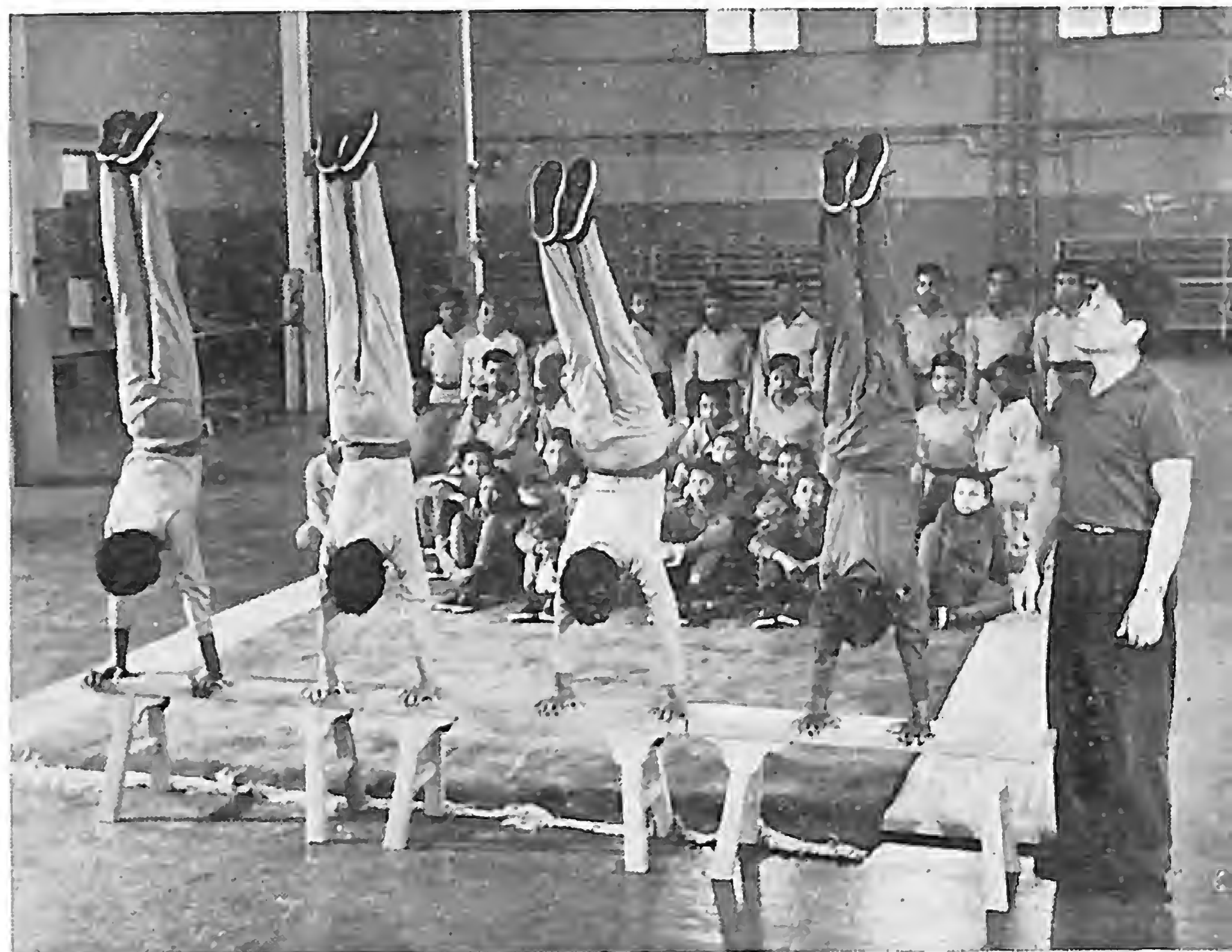
NOT LONG AGO we visited a group of Sudanese students who are studying acrobatics with the Wuhan Acrobatic Troupe. They enthusiastically told us of their study and life there and invited us to see their training and rehearsals.

The 50-member group headed by Mohammed Saleh and Mahdi Ali arrived in Wuhan in September 1971 and were warmly welcomed by the members of the Wuhan Acrobatic Troupe. Viewing this as an opportunity to promote friendship between the peoples of the Sudan and China and to learn from the Sudanese people, the troupe assigned veteran acrobats and musicians to train the students.

The youngsters, ranging in age from 9 to 15, were chosen for their love of acrobatics. Thirty-five of them are studying acrobatics and the rest music. The three-year course is divided into three stages: basic training, basic training for specific program items, rehearsals and performing. At the time of our visit they had begun the second stage.

According to their teachers the Sudanese students take the course seriously and work very hard at meeting the strict requirements of training for the basic leg and back movements, hand-stands and somersaults. Eleven-year-old Awadala, who is tall for his age, had a

Sudanese youngsters at basic training.



particularly hard time with handstands and somersaults, but he was not to be daunted. Coached by his teacher, he followed instructions conscientiously and gradually improved his skill. A month of hard training enabled him to stand on his hands with his feet against the wall for 4 minutes at a stretch. Although 14-year-old Hadim had blisters on his hands, he continued to practice somersaults, drilling every day regardless of the pain. His strong willpower and stubborn attitude won high marks with the Chinese teachers.

In a bright and spacious gymnasium we found many students practicing cycling, pole climbing, tightwire-walking, performing on the trapeze and other skills. As 11-year-old Solofa Hassan Ali lay on her back on a bench spinning a porcelain jar with her feet, her coach stood by, now and then encouraging her: "Good! Fine!" During a break the coach told us that Solofa had reached this level of performance through putting in great effort. Every day she juggled the jar with her feet no matter how tired she was. When her legs were tired she took a little rest and then tried again. Through such persistence she can now juggle the jar with ease. Ahlam, another girl, was practicing tightwire-walking,

which requires great courage and a spirit of daring. After many failures she improved greatly. Now she can walk the high wire without supports and do some movements on it.

THOSE who concentrate on music have mastered fundamental theory and each has learned to play either the cello or a Chinese traditional instrument — the flute, the *sheng* wind pipes, the *sona* horn, the *erh hu* two-stringed fiddle or the *pipa*, a fretted guitar-like instrument. As an ensemble they can perform musical accompaniment for the acrobats as well as their favorite Sudanese piece, "The Month of May March". Of course these achievements did not come easily. They found it rather difficult to master the Chinese instruments. When Abdul began learning to play the *erh hu* he found it difficult to coordinate the movements of his right and left hands. With patient guidance from the teacher and hard practice he made much progress. Now he can give solo performances as well as play in the orchestra.

"Before we came to China Mahdi and I were worried whether our boys and girls could master the skills," said Saleh, leader of the group. "But now we see that our worries were unfounded. Before

we left home President Nimeri received us and this gave us great inspiration. The young people have been in good spirits ever since we came. They all study very hard, for they are eager to be able to perform in Khartoum as soon as possible."

Living and working together has created a feeling of profound friendship between the Sudanese students and the teachers and other acrobats of the troupe. They learn from and care for each other.

On holidays the Sudanese students put on their national costumes and join the people of Wuhan at gala parties. Last spring they went on an excursion to beautiful East Lake in Wuhan and had a get-together there with teachers, acrobats and Chinese apprentices of the Wuhan troupe.

Visiting places around Wuhan is another favorite activity. They have been to the Central Institute of the Peasant Movement run by Chairman Mao in 1927 and the house where he once lived, the big iron and steel company, a cotton mill and other factories. Everywhere they have been heartily welcomed.

Asked what impressed them most after coming to China, the Sudanese friends replied, "Friendship!"

A few pointers on how to play the *pipa*.



An orchestra is born.



Lesson 10

看病
Kàn Bìng
Seeing the Doctor

大夫：琼斯先生，请坐。我讲的话
Dàifu: Qióngsī xiānsheng, qǐng zuò. Wǒ jiǎng de huà
Doctor: Jones Mr., please sit. I speak words

你听得懂听不懂？
nǐ tīng de dǒng tīng bu dǒng?
you hear understand hear not understand?

琼斯：听得懂。我来中国已经
Qióngsī: Tīng de dǒng. Wǒ lái Zhōngguó yǐjīng
Jones: Hear understand. I came (to) China already

三年了。
sānnián le.
three years.

大夫：你怎么不舒服？
Dàifu: Nǐ zěnmē bù shūfu?
Doctor: You how not comfortable?

琼斯：我头疼，发烧，吃不下，睡不
Qióngsī: Wǒ tóu téng, fā shāo, chī bu xià, shuì bu
Jones: I headache, fever, eat not, sleep not

好，觉得全身没有力气。
hǎo, juéde quán shēn méiyǒu lìqì.
well, feel whole body have no strength.

大夫：现在你的体温是
Dàifu: Xiànzài nǐ de tǐwēn shì
Doctor: Now your body temperature is

三十八度一。你张开嘴，我
sānshíbādù yī. Nǐ zhāngkāi zuǐ, wǒ
38.1 degrees. You open mouth, I

看看。
kànkàn.
look.

琼斯：我扁桃腺肿不肿？
Qióngsī: Wǒ biǎntáoxiàn zhǒng bu zhǒng?
Jones: I tonsils swollen not swollen?

大夫：不肿。你解开上衣，我听一听。
Dàifu: Bù zhǒng. Nǐ jiěkāi shàngyī, wǒ tīng yī tīng.
Doctor: Not swollen. You unbutton jacket, I listen one listen.

深呼吸，再深呼吸。好了。
Shēn hūxī, zài shēn hūxī. Hǎo le.
Deep breathe, again deep breathe. All right.

是感冒。
Shì gǎnmào.
(It) is (a) cold.

琼斯：要打针吗？
Qióngsī: Yào dǎ zhēn ma?
Jones: Need injection?

大夫：不打。吃点药。回家以后，
Dàifu: Bù dǎ. Chī diǎnr yào. Huí jiā yǐhòu,
Doctor: No. Take some medicine. Go home after,

你要按时吃药，多喝
nǐ yào ànshí chī yào, duō hē
you need on time take medicine, much drink

开水，好好休息，过几天，
kāishuǐ, hǎohǎo xiūxi, guò jǐtiān,
boiled water, well rest, after few days,

就好了。
jiù hǎo le.
will (be) better.

琼斯：好。谢谢，再见。
Qióngsī: Hǎo. Xièxie, zàijiàn.
Jones: Good. Thanks, good-bye.

大夫：再见。
Dàifu: Zàijiàn.
Doctor: Good-bye.

Translation

Doctor: Please sit down, Mr. Jones. Can you understand what I say?
Jones: Yes, I have been in China three years.
Doctor: You don't feel well?
Jones: I have a headache and fever. I don't sleep well, have no appetite and feel weak all over.
Doctor: Your temperature is 38.1 degrees. Open your mouth and let me have a look.
Jones: Are my tonsils swollen?
Doctor: No. Please unbutton your jacket and I will listen to your breathing. Take a deep breath, another deep breath. All right. It is a cold.
Jones: Do I need to have an injection?
Doctor: No. Take some medicine. When you get home, take the medicine at the proper times, drink plenty of hot water and have a good rest. After a few days you will be all right.
Jones: All right, thanks. Good-bye.
Doctor: Good-bye.

Notes

1. The alternative question form. One way questions are formed in Chinese by expressing the alternative answers to it in the predicate. For example: Nǐ kàn bu kàn? 你看不看? (Do you want to see?) The answer can be kàn 看 (see) or bú kàn 不看 (not see). Other examples: Tā yǒu méiyǒu gēge? 他有没有哥哥? (Does he have elder brothers?)

Answers: yǒu 有 (has) or méiyǒu 没有 (has not). Wǒ biāntáoxiàn zhǒng bu zhǒng? 我扁桃腺肿不肿? (Are my tonsils swollen?) Answers: zhǒng 肿 (swollen) or bù zhǒng 不肿 (not swollen).

2. *The potential complement.* This is another form of usage in Chinese that offers an alternative of two things that can happen. A complement is an additional element following a verb or adjective. In Lesson 4 we had the "complement of result" which tells the result of an action. With the potential complement, de 得 or bu 不 is inserted between the verb and its complement to indicate whether or not a thing will happen, as in chī de wán 吃得完 (can eat up), or, in the negative form, chī bu wán 吃不完 (cannot eat up). Other examples are tīng de dǒng 听得懂 (can understand) and shuì de hǎo 睡得好 (sleep well), and in the negative, tīng bu dǒng 听不懂 (cannot understand) and shuì bu hǎo 睡不好 (cannot sleep well).

The potential complement form can be used as a question followed by the modal particle ma 吗, as in Wǒ jiǎngde huà nǐ tīng de dǒng ma? 我讲的话你听得懂吗? (Do you understand what I am saying?) The potential complement can also be used in the alternative form of question, as in Wǒ jiǎng de huà nǐ tīng de dǒng tīng bu dǒng? 我讲的话你听得懂听不懂? (Do you understand what I say?)

3. *The subject-predicate construction.* Tóu téng 头疼 (head aches) and biāntáoxiàn zhǒng 扁桃腺肿 (tonsils swelled) are both subject-pred-

icate constructions. In Chinese this construction can be used as any part of a sentence.

(a) It can be used as the predicate, as in Wǒ tóu téng 我头疼 (I have a headache), Wǒ biāntáoxiàn zhǒng 我扁桃腺肿 (I have swollen tonsils). In these two sentences, wǒ 我 (I) is the subject of the whole sentence. The subject-predicate constructions tóu téng 头疼 (headache) and biāntáoxiàn zhǒng 扁桃腺肿 (swollen tonsils) are the predicates.

(b) It can also be used as an object as in Wǒ juéde quán shēn méiyǒu lìqì 我觉得全身没有力气 (I feel weak all over). In this sentence, the subject-predicate construction quán shēn méiyǒu lìqì 全身没有力气 (weak all over) is the object of the verb juéde 觉得 (feel).

(c) It can be used as the subject, as in Shēntǐ hǎo hěn zhòngyào 身体好很重要 (Good health is very important). The subject is the subject-predicate shēntǐ hǎo 身体好 (good health).

Exercise

Translate the following sentences into Chinese:

1. He is in very good health.
2. I think he speaks Chinese very well.
3. We can't eat up so many tomatoes.

(Answers on p. 37)

Lesson 11

参观 人民 公社

Cānguān Rénmín Gōngshè

Visiting a People's Commune

上 星期日, 我们 参观了 团结 人民
Shàng xīngqīrì, wǒmen cānguānle Tuánjié rénmin
Last Sunday we visited Unity People's

公社。公社的 同志 首先 请 我们
gōngshè. Gōngshè de tóngzhì shǒuxiān qǐng wǒmen
Commune. Commune's comrades first invited us

参观了一个 水库。这个 水库 是 1958年
cānguānle yige shuikù. Zhège shuikù shì yījiǔwūbānián
visit a reservoir. This reservoir was (in) 1958 year

修建的, 它能 灌溉 公社的 大部分
xiūjiàn de, tā néng guàngài gōngshè de dà bùfen
built, it can irrigate commune's large part (of)

土地。
tǔdì.
land.

参观完 水库, 我们 就 到了
Cānguānwán shuikù, wǒmen jiù dào le
Visit finished reservoir, we immediately came (to)

幸福沟。这个 名字 是 去年 才 取的。
Xìngfúgōu. Zhège míngzi shì qùnián cái qǔ de.
Happiness Ravine. This name was last year only chosen.

三年 以前, 这里 还 是 一条 石头 沟。
Sānnián yǐqián, zhèlǐ hái shì yī tiáo shítou gōu.
Three years ago, here still was a stony ravine.

为了 建设 社会主义 新农村, 社员们
Wèile jiànshè shèhuìzhūyì xīn nóngcūn, shèyuánmen
In order to build socialist new countryside, commune members

苦 干 了 两 个 冬 天。他 们 运 走 了 沟 里 的
kǔ gànle liǎng ge dōngtiān. Tāmen yùnzǒule gōulǐ de
hard worked two winters. They carried away ravine's

石 头, 修 成 了 梯 田。如 今, 石 头 沟
shítou, xiūchéngle tītán. Rújīn, shítou gōu
stones, built terraced fields. Now stony ravine (has)

变 成 了 丰 产 田。
biànchéngle fēngchǎn tián.
become bumper harvest field.

团 结 人 民 公 社 的 生 产 一 年 比
Tuánjié rénmin gōngshè de shēngchǎn yīnián bǐ
Unity People's Commune production one year compare

一 年 提 高, 社 员 的 生 活 也 一 天
yīnián tígāo, shèyuán de shēnghuó yě yītiān
one year raised, commune members' life also one day

比 一 天 好。这 次 参 观 使 我 们 受 到
bǐ yītiān hǎo. Zhècì cānguān shǐ wǒmen shòudào
compare one day good. This visit caused us receive

很 大 教 育 和 鼓 舞。
hěn dà jiàoyù hé gǔwǔ.
very big education and encouragement.

Translation

Last Sunday we paid a visit to the Unity People's Commune. The comrades from the commune first invited us to visit a reservoir. It was built in 1958 and can irrigate most of the commune's land.

(Continued on p. 34)



Tsui Hsiu-mei

BOTH my husband and I work in the Peking Department Store, the city's largest. My husband, Wang Chun-chuan, is on the management staff. I work behind the counter. We have three daughters. The older two, aged 10 and 8, are in primary school. The youngest, 4, goes to the nursery run by the store. Although both of us work and we have children, we have all along been able to work with our minds free from domestic worries and have never needed to let housework and having children affect our progress.

Finding a Job

Since liberation not only do the women of new China enjoy political equality but an increasing number of them have left the confines of the home to take on jobs in all fields. One day in 1956, when I was 16, I came into town from the outskirts and heard that the department stores were advertising for shop assistants. I plucked up courage and applied, not really expecting to be taken on, but I was accepted. When I went home and told the family, my father was much moved. "You're living in good times, daughter," he said. "In my day even men had a hard time

getting a job of any kind, to say nothing of girls like you."

When I reported for work I was put on the "trainee shift". It was explained to me that this was for rather young beginners like myself. We were to work seven hours instead of the regular shift while still getting the full pay. That would enable us to get more rest and to study more.

Marriage

I found my work very interesting and put all my energy into becoming a good saleswoman. I moved into the living quarters for single women staff members and after work would get together with my girl friends to chat, sing or read.

I love basketball and spent a lot of time on the court in the yard. I took part in almost every match, either against another department in the store or as a member of our store's team in city tournaments. That was how I met Wang Chun-chuan, also a basketball fan. We found we had a lot in common besides basketball. We often did our political reading together and we found we were very close together in our thinking. Temperamentally we suited each other too. An



The youngest girl.

A Saleswoman's

affection grew up between us and in 1962 we were married.

Several months after our marriage I became pregnant. As a worker in a state enterprise I am covered by National Labor Insurance. Once a month, later once every two weeks, I could take time out from work for a checkup. From my seventh month of pregnancy I worked seven instead of eight hours, with no cut in pay. My baby was born in the hospital with which our company has a contract, with all expenses for delivery and hospitalization, except for meals, paid by the Labor Insurance Fund. I had 56 days of maternity leave with pay.

Motherhood

Life became more complicated after I became a mother, but the main problem of child care was solved by the crèche of the nursery run by our store, which is not very far from where we live. There are four classes in the nursery: At 56 days infants can enter the nursing class. When a child is one and a half years old he goes on to the lower class; at three he goes on to the middle class; and at five he goes on to the higher class. When the child is seven years old he leaves to go on to primary school.



The author's two older daughters.

Home Life

TSUI HSIU-MEI

Either Chun-chuan or I took the baby to the nursery on our way to the store and picked her up after work every day. According to the regulations I was permitted to take half an hour off twice a day, in the morning and afternoon, to run over to the crèche to nurse the baby. This went on until she was weaned. When our daughter was one and a half years old, we put her in the full-time nursery, that is, she lived there all week and came home to us for Saturday night and Sunday. We could go and visit her any time we wanted. In this way I needed to worry even less about the child.

Chun-chuan earns 68 yuan a month and I get 55. When our daughter was in the day crèche we paid 6 yuan a month for her care and an additional sum for food, which included milk and fruit. When she started going full time we paid 15 yuan a month which covered everything, including food. The rather low fee is possible because the company subsidizes the nursery out of its workers' welfare fund.

When my first child entered the nursery I worried about this and that. But after I learned all about the nursery I felt that my worries were unnecessary. The nurses are

patient and affectionate. The children get regular health check-ups and all the necessary preventive inoculations. Clothes and bedding are washed and changed regularly. During the hot summer days the children are given baths every day. Particularly after the age of three attention is paid to various aspects of character education, such as honesty, love of labor and an attitude of caring for public property.

All three of my daughters grew up in the nursery. Beginning collective life at a very early stage, they have developed good habits and are all in good health. While they were in the nursery I did not have to be bothered when they had light illnesses, as these were attended to by the nursery health

worker. When the trouble was more serious, they called me at the store and I would be given time off to take the child to the clinic. Some times if we happened to be very busy the nursery staff would do this for me. Last autumn I was sent to the far outskirts of the city to interview job applicants. A few days after I left, my youngest daughter suddenly ran a high fever. A member of the nursery staff immediately took her to the clinic and called my husband to say that she had done so.

Household Tasks Are Shared

Since Chun-chuan and I both work, we don't want to spend much time cooking. Usually we have breakfast and supper at home and eat our lunch in the staff dining

Tsui Hsiu-mei and her family pause before goldfish tubs in the park.



room. Quite often we buy cooked rice or steamed bread at the dining room and come home and cook one or two vegetable or meat dishes that we like. This saves much time and enables us to eat in a home atmosphere more often. When we are busy we sometimes eat all three meals in the dining room, and our two older daughters come to join us.

On Sunday when the whole family gets together we usually have some special dishes. Chun-chuan and the children go to the market and select some fish, a family favorite, or we all pitch in and make *jiaozi* (filled dumplings), a treat for the children. Since Chun-chuan is a good cook he frequently prepares the food while I do the laundry or mending. After lunch the children usually clamor to go to the park or to see a film. We generally follow their wishes and take them out.

Chun-chuan and I share the daily housework. The two older girls are beginning to take quite a bit of it off our hands. They have one characteristic in common: they are diligent and love labor. They fight to go on little errands, such as running to the store for things like soy sauce or vinegar. There were quite a few funny incidents while the older child was learning to cook rice. Once she put the rice on the

stove and then went out to play jumping-the-rubber-band with the other children. By the time she thought of the rice the whole potful was scorched. When I saw it I didn't know whether to laugh or cry.

"Who's going to eat this rice?" I said weakly.

"Well, Mama, you're always telling us not to waste grain . . ."

In the end we all ate it.

We make it a point not to spoil the children and do our best to cooperate with the school in character education and cultivating in them a thirst for knowledge. The girls all try to do as Chairman Mao teaches, "Study well and make progress every day."

On National Day last year my cousin took my second daughter to the park. The girl saw a fountain pen lying on the grass. She picked it up and called out, "Whose fountain pen is this?" When no one answered, she dragged my cousin out of the park with her, found a policeman and handed the pen to him to be placed at the lost-and-found center.

The oldest girl is very capable at housework. She does her own laundry and sometimes that of her sisters. She helps them wash their hair. On Saturday afternoon she

often goes and fetches her youngest sister from the nursery so that my husband or I do not have to do it.

Of an evening we like to look through the day's *People's Daily* to keep up with important international and domestic affairs. Sometimes we turn on the radio and listen to music or operas. I spend some of the time studying Marxist-Leninist classics and Chairman Mao's writings. All my colleagues are making a serious study of these and I have to work extra hard to keep up because I did not have as many years of schooling as most of them. Chun-chuan helps me a good deal. When we were studying the *Communist Manifesto*, he found some background material for me to read and discussed the more difficult points with me. He often recommended newspaper articles in which people who had studied the *Manifesto* told what they had got out of it.

Our household arrangements enable us to give our full attention to our work. If someone at the store happens to be out sick and there is no substitute available, I can easily put in extra hours, and it always gives me a good feeling to be able to contribute a little more to the building of socialism, however small my part.

(Continued from p. 31)

After that we went right to Happiness Valley. This name was chosen only last year. Three years ago it was still a ravine filled with stones. In order to build a new socialist countryside, the commune members worked hard for two winters. They carried away all the stones and terraced the ravine. Now the former stony ravine has been transformed into fertile fields.

With production increasing year by year, the commune members' life is becoming better and better. We learned a great deal from the visit and it gave us great encouragement.

Notes

1. *The pivotal sentence.* This kind of sentence consists of two subject-predicate constructions. The object in the first S-P construction is at the same time the subject of the second one, as in *Wǒ qǐng tā lái* 我请他来 (I invite him to come). In this sentence *tā* 他 (him) is both the object of the first subject-predicate construction *wǒ qǐng* 我请 (I invite) and the subject of the second one *tā lái* 他来 (him to come). *Gōngshè de tóngzhì shǒuxiān qǐng wǒmen cānguānle yíge shuǐkù* 公社的同志首先请我们参观了一个水库 (The commune comrades first invited us to visit a reservoir). In this sentence, *wǒmen* 我们 (us) is the object of the first subject-predicate construction and at the same time the subject of the second one. There are many similar sentences, such as *Zhècì cānguān shǐ wǒmen shòudào hěn dà jiàoyù hé gǔwǔ*. 这次参观使我们受到很大教育和鼓舞 (We learned a great deal from the visit and it gave us great encouragement).

2. *shì de* 是 的 In order to stress a certain point, the construction *shì de* 是 的 is often used, as in *Zhège shuǐkù shì yījiǔwǔbānián xiūjiàn de* 这个水库是1958年修建的 (This reservoir was built in 1958). We want to stress the time 1958, and no other time. Another example: *Zhège míngzi shì qùnián cái qǔ de* 这个名字是去年才取的 (This name was chosen last year). Here it stresses last year. These two examples both stress time (it must be the past time). This is only one of the usages of the construction *shì de* 是 的。 We shall explain its other usages later.

3. *jiù* 就 and *cái* 才 The character *jiù* 就 implies that a thing happened soon after an event or is to happen very soon, as in *Cānguānwán shuǐkù, wǒmen jiù dào le Xìngfúgōu*, 参观完水库, 我们就到了幸福沟 (After visiting the reservoir we went right to Happiness Valley). Another example: *Tā qī diǎn zhōng jiù lái le* 他七点钟就来了 (He came promptly at seven o'clock). *Cái* 才 means that the speaker thinks a thing happens very late, such as *Nǐ zěnmè xiànzài cái lái?* 你怎么现在才来? (How is it that you came only now?) Another example: *Zhège míngzi shì qùnián cái qǔ de* 这个名字是去年才取的 (This name was chosen only last year).

Exercise

Translate the following sentences into Chinese:

1. My friend invited me to see a sports exhibition.
2. He arrived in Peking only yesterday.
3. We went shopping right after dinner.

(Answers on p. 37)

Golden Grassland



In spite of a severe drought, the herdsmen of the Chaowudah League in northeast China's Liaoning province increased their total number of livestock by 20.4 percent in 1972.



An old herdsman.

Sheep on the pasturelands.



Haymaking.

Harvesting buckwheat.



Roundup.





In an assembly shop at the plant.

WHEN it was set up in 1956 the Coal Mine Safety Instruments Plant, located in China's coal capital Fushun, filled a blank in China's industrial picture. In the 16 years since then the plant has made continual improvement on its products and has introduced a number of new ones.

In old China coal mine safety was extremely backward. There was little equipment to detect conditions that could lead to flooding, fire, gas or roof-falls, and little for effective rescue after an accident. A local folk song described the lives of the miners:

*Hazards everywhere below,
No escape from accidents.
Get your rice from coal
Pay for it with your life.*

At the Fushun Collieries, for example, before liberation the reactionary rulers were concerned only with getting out as much coal as possible and getting as much as possible out of the miners. They were unwilling to spend money on installing safety equipment. Accidents were a common occurrence. Records show that an average of 23 miners a day were killed or injured underground between 1916 and 1944. This works out to one death or injury for every 700 tons of coal mined.

After liberation the People's Government established a set of strict safety regulations. It put effort into research on mine safety and regularly carried on safety education among the miners. Many kinds of safety instruments and equipment were purchased from abroad.

Mine Safety Equipment Constantly Improves



Some of the products of the Fushun Coal Mine Safety Instruments Plant.

After the Coal Mine Safety Instruments Plant was built China began supplying her own needs. The plant, with over 1,000 workers, produces 39 types of safety instruments and devices. Among its 300 pieces of equipment are many precision machine tools used in making finely-machined, highly sensitive instruments. The plant supplies coal mines all over the country.

New Items

One of the new products, an indicating gas alarm, was developed during the Great Proletarian Cultural Revolution. It gives an accurate, sensitive indication of the amount of gas in a pit. In addition to a meter it uses a light and sound as a warning. The workers call it "our talking meter". It is a boon particularly in Fushun, known for its high gas levels.

Before liberation the main method of determining gas levels in the Fushun mines was with a

primitive safety lamp, whose flame rose higher as the amount of gas in a pit increased. The method was inaccurate as well as unsafe.

Around 1959 the instruments plant began producing a gas detector along the lines of one made abroad. Although it was safe, reliable and 11 times more accurate than the safety lamp, in 1969 when workers from the plant visited mines to see it in operation they found that the miners had objections to it. It was inconvenient to use, required a special operator, and gave no obvious warning when the gas approached danger levels.

In less than a year the plant succeeded in trial-producing a small, sensitive indicating gas alarm. Taking it with them to the work face, the miners set it for the maximum level of gas they deem safe. If the gas exceeds this level a siren sounds and the green light denoting safety is replaced by a flashing red danger signal.



An instrument-maker gets miners' ideas on how to improve the gas alarm.

In the past few years the plant has also begun manufacturing roof-pressure gauges, used in preventing falls, a combined gas indicator and airspeed meter, and several other instruments for accident prevention.

Old Products Improved

The plant's original products, equipment for rescue operations, are also being continually improved through innovations by the workers.

The oxygen respirator formerly made for mine rescue teams was large and not very efficient. Although it enabled rescue workers to function at the site of an accident for four hours, they had to wear a nose-clip and breathe through a mouthpiece. They couldn't talk and could only communicate by means of sign language or grunts. It put a strain on the wearer and hindered rescue operations.

After six months of experimentation, the plant's workers succeeded in making a pilot model of a smaller, lighter, four-hour oxygen respirator. It provides an ample supply of oxygen regulated according to the consumption of the wearer. Since with this respirator it is possible to breathe through the nose and speak normally, it is much appreciated by rescue crews.

The plant also keeps improving devices for use by the miners themselves. The carbon monoxide filter respirator previously used in the Fushun Collieries only filtered out the poisonous gas, but could not help the wearer in an environment lacking oxygen, such as that produced by roof-falls or gas blow-outs. Now the plant's workers have developed a self-contained oxygen generator.

In the course of developing the new device, Tsui Lien-fu, a young technician, went into dangerous parts of the shafts along with the

miners to study the changes in natural conditions in the mine in the course of production. For a year he and several veteran workers labored to make a new product which could meet the miners' needs in a critical situation. They finally produced an easily-carried self-contained generator which provides a supply of oxygen long enough for miners to safely leave a danger zone.

When Tiao Hsiu-shan, an old miner, saw the new apparatus for the first time, he told the following story.

"In 1939 there was a big fire," he related. "Many miners suffocated down below for lack of oxygen. The greedy capitalists were only concerned with preserving their machines and equipment. They didn't care whether the workers lived or died. They ordered the shaft opening sealed, hoping to put out the fire by cutting off the supply of oxygen. My father Tiao Ta-teh had been lucky enough to crawl to the shaft opening, but the foreman kicked him back in and ruthlessly sealed it up. He was left to suffocate inside.

"Today Chairman Mao and the Party do everything they can to see that we get more and better equipment that will save our lives. We miners ought to do everything we can to produce more and better coal to build socialism."

Answers to Language Corner Exercises

Lesson 10

1. 他身体很好。
2. 我觉得他说中文说得不错。
3. 我们吃不完这么多西红柿。

Lesson 11

1. 我朋友请我看体育表演。
2. 他是昨天才到北京的。
3. 我们吃完饭就去买东西。

NEW HOUSING FOR THE WORKING PEOPLE

CHUNG CHIEN



Veteran worker Wang Fu-ching and his family in their new apartment. For two generations before liberation his family lived in a hut of straw matting on Melon Lane.



Before one of the huts which has been preserved, Wang Fu-ching tells children about the miserable life residents of Melon Lane led in the old society.

WHEN the huts of Melon Lane in Shanghai were cleared away to build a new workers' village of five-story apartments, the textile and transport workers who were to live there insisted on leaving one of the old dwellings. They wanted their descendants to see what kind of housing the working people had once lived in.

Before liberation one-fifth of the population of Shanghai, China's largest industrial city, lived in rude huts of wood or mud or in sheds made of mats in over 300 slum areas. Some even had to sleep in the streets or huddle under the eaves for shelter the year round.

These slums have now disappeared, replaced by new workers' villages or apartments for the working people. Within 22 years after liberation, the government built almost 10,000,000 square meters of new housing in Shanghai and renovated an additional 14,000,000 square meters, solving the housing problem for over 2,000,000 people.

The change in housing conditions for the working people of Shanghai is indicative of the change in China's other cities.

Before liberation dilapidated and unsafe buildings accounted for over 50 percent of the housing in China's major cities; in Peking, for 67 percent. In Changsha, Hunan province, slum housing made up 77 percent of the city's residential floorspace. There were over 360 slum areas in Nanking. New China was left with all these problems.

In the Five-Year Plan

Construction of urban dwellings is an integral part of each five-year



The new workers' village on Melon Lane, Shanghai.

plan for national economic development. Statistics for only eight of China's large and medium-sized industrial cities (Peking, Shanghai, Kwangchow, Nanking, Tientsin, Huhehot, Loyang and Hofei) add up to new housing for almost 15,000,000 employees and their families built by the people's government between liberation and 1971 (the beginning of the Fourth Five-Year Plan). In Kwangchow, 11,000 families of Pearl River fisherfolk, who for generations had lived on their small boats, have moved into new four- to six-story apartment buildings.

As production develops, the state keeps increasing its allocation for housing construction. If 1 is taken to represent this figure for 1950, then by 1953 (the beginning of China's First Five-Year Plan), it was 5.3 and by 1958 (the beginning of the Second Five-Year Plan), 10.5. During each year of the Third Five-Year Plan (1966-1970) the state built new housing for almost 3,000,000 urban dwellers.

In many cities the floorspace of dwellings built since liberation far surpasses that remaining from the old society. Take Peking, the capital, for example. At the time of liberation there were only 13,000,000 square meters of housing, built within the previous 500 years. Within 21 years after liberation almost 20,000,000 square meters of new housing were built, 1.5 times the original floorspace.

The proportion is even greater in some new industrial cities. In Pao-tow in the Inner Mongolia Autonomous Region, for instance, the new floorspace is 3.4 times that at the time of liberation; in Loyang in

Honan province it is over 4 times, and in Hofei in Anhwei province 8 times the old.

There has also been extensive construction of urban dwellings in minority-nationality regions such as Sinkiang, Kwangsi, Yunnan and Tibet. In thousand-year-old Lhasa in Tibet new floorspace is more than double the old. The new residential district has clinics, restaurants, a children's palace, an exhibition hall, a cultural palace for the working people, bookstores and a large department store. Lhasa now has asphalt roads, running water, public busses and electric lighting, all of which it never had before.

For the Working People

Since liberation the government has carried out capital construction in over 2,000 cities, towns and industrial areas throughout China. Of these, almost 300 cities and towns were newly built or extensively rebuilt. Municipal construction includes making roads, planting trees, building parks, and installing or improving water supply and sewerage systems.

When building new urban residential districts the planning departments consider the convenience of both working and living arrangements for the laboring people. Each district with a population of 30,000 to 60,000 generally has a department store, general market, club, library, theater and stadium.

Districts are divided into sub-districts ranging in population from 6,000 to 12,000, with a primary school (the larger ones also have a middle school), club, post office,

clinic, barber shop, kindergarten, grain store, coal yard, tailor shop and other services.

Some factories and mines have planned their residential areas to fit their special conditions. At the sprawling Taching Oilfield workers are housed in settlements close to the widely-scattered extraction areas. In line with the policy of "combining industry and agriculture, urban and rural in the interests of production and for convenient living", Taching employees and their families have built with their own hands a total of over 1,000,000 square meters of housing surrounded by level farm fields.

The workers who live there are mainly engaged in industrial production, but are sometimes called out to do farm work in turns. Most of the farming is done by the members of their families, some of whom also work in the stores or in industrial jobs.

Each settlement generally has its own health station, primary school and general store. Several settlements are served by a central village with a clinic, middle school, stores, farm machinery station, post office and other services. A network of roads connects the settlements and production units.

Sites are selected for new urban workers' housing for good natural environment and nearness to the occupants' place of work. Buffer zones of trees separating the two minimize smoke and noise. All new housing has electric lighting and running water, and some has gas. These were all luxuries rarely available in the homes of ordinary working people in the old society. In northern China the new housing has central heating, heated walls or heated brick beds.

Rent: Five Percent of Income

State-built housing is run by the housing administration of the local people's governments or turned over to factories to be run by them. Monthly rent (including water, electricity and central heating) is generally about 5 percent of a family's income. The state or factory takes care of all maintenance.

Grain Prices

Do Not Go Up in China

IN the year 1908 Chiao Kuei-chai, an old man in Kweichow province, began making a note of grain prices as they fluctuated daily on the market. Shortly after the founding of the New China in 1949, he stopped keeping his record. It was no longer necessary, he concluded, for the price of grain had been stabilized. Fluctuating grain prices in China have been relegated to the museum of history, as has Chiao Kuei-chai's record, which is now in the Museum of the Chinese Revolution in Peking.

For 23 years, since the liberation, grain prices have remained stable. Flour and rice, the main staples in the Chinese diet, are sold at an average of 0.35 yuan and 0.30 yuan per kilogram respectively. These prices have remained almost the same since 1953.

In old China the sale and purchase of grain were monopolized by the reactionary Kuomintang government and the landlords and capitalists, who used their control to hoard and speculate. In autumn the profiteering merchants and landlords would buy up the harvest at very low prices at the expense of the peasants; then in spring, when the old stock had been consumed and the new crop was still in the blade and the people had nothing to eat, they would sell from their stocks at high prices.

On the eve of liberation grain prices were skyrocketing. In Shanghai the retail price of rice was 640 "gold yuan" (KMT government's currency) a picul (133 $\frac{1}{3}$ lbs.) on January 5, 1949. By Jan. 22 the price had jumped to 1,800 and by Jan. 28 to 2,800 yuan. By February 4, it had already soared to 4,600, seven times what it had stood at a month before.

Immediately after the People's Republic of China was founded on October 1, 1949, the Communist Party and the People's Government undertook a series of measures to end inflation and soaring prices. Beginning in March 1950 prices in the market stopped going up and began to drop. The price of grain, the one most important to the working people, began to be stabilized, too.

In 1953 the state nationalized the purchase and marketing of grain. Free trading in grain by private merchants was ended and speculation in it was wiped out. The policy

of fixed grain prices guarantees their long-term stability in China.

Staple foods are supplied according to a planned ration which ensures that everybody will have enough to eat. When an area has been seriously hit by natural calamities, the government brings in large quantities of grain from other places. Annual per capita consumption far exceeds that of pre-liberation days.

Since liberation the People's Government has on several occasions raised prices it pays the peasants for grain, while maintaining stable sales prices. The difference between the two prices, the cost of transportation and other expenses are made up out of the state economy. As a result peasant income has increased, and the urban people, too, benefit.

China is now self-sufficient in grain. Every year she exports some kinds of grain while importing other kinds. The state and the people's communes and many peasant households have set aside grain reserves which are increasing year by year.

Grain store. The quotation above the price list reads: "Develop the economy and ensure supplies."

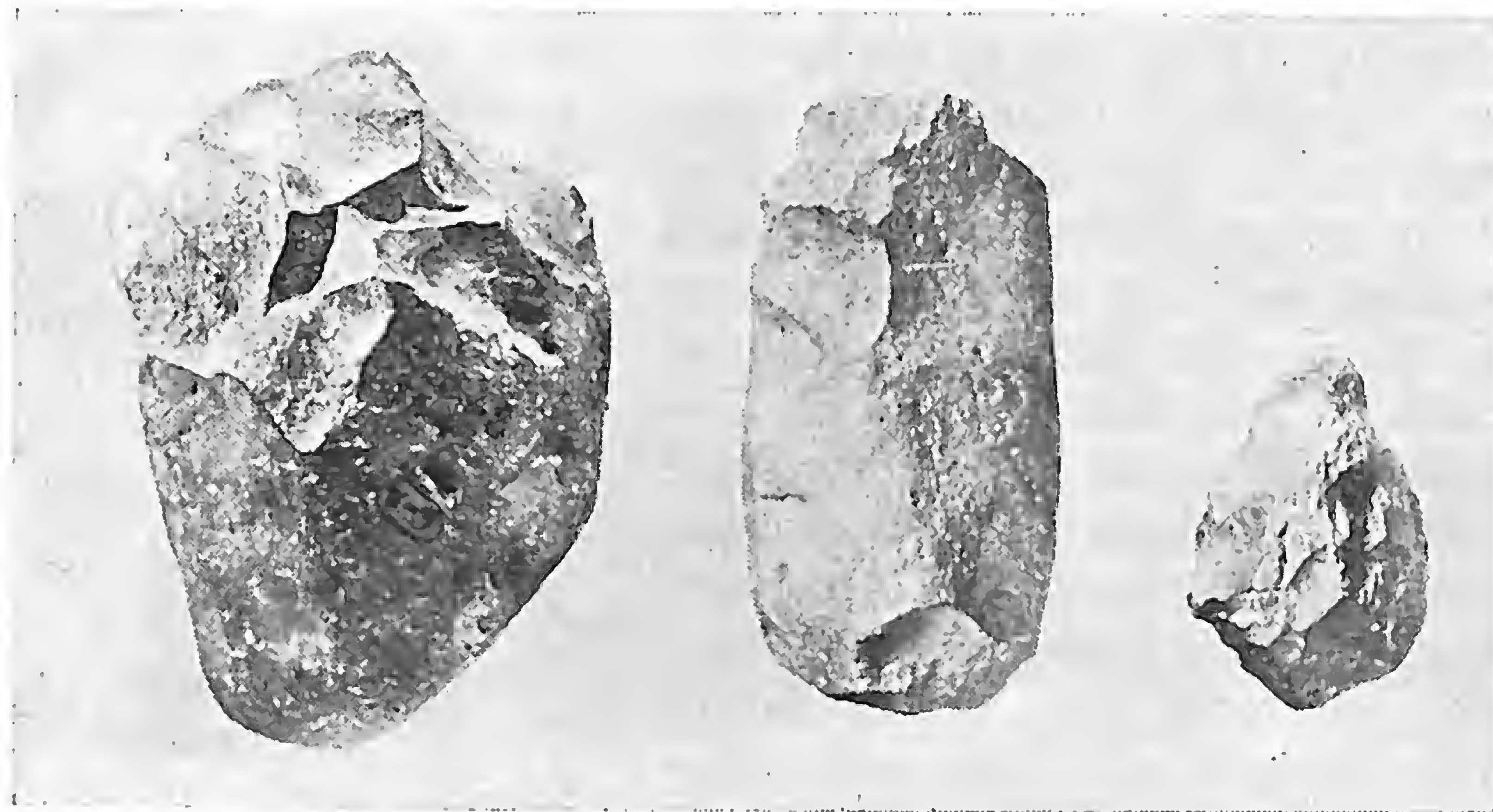




Left:
A model of *Sinanthropus pekinensis* woman, reconstructed on the basis of fossil discoveries.

Right:
Skull cap of Peking Man unearthed in 1966.

Below:
Stone tools used by Peking Man. Left to right: chopper, hammer, scraper.



EXHIBITION ON PEKING MAN

PEI WEN-CHUNG

various parts of China; stone artifacts and animal fossils excavated at Choukoutien and reconstructed models showing the life of Peking Man in his natural environment; and fossils of important vertebrate animals — dinosaurs, fishes, reptiles and primitive mammals — discovered in China.

The exhibition reflects the progress in paleontology and paleoanthropology made by Chinese scientists.

A permanent exhibition featuring material on Peking Man (*Sinanthropus pekinensis*) and giving a brief outline of the origin and development of mankind opened recently at Choukoutien, the world-famous site 48 kilometers southwest of Peking where fossils of Peking Man were first discovered.

Arranged by the Institute of Vertebrate Paleontology and Paleoanthropology of the Chinese Academy of Sciences, the exhibits are of three types: fossils of Peking Man and other early men found in

PEI WEN-CHUNG, a research fellow of the Institute of Vertebrate Paleontology and Paleoanthropology, Chinese Academy of Sciences, is the discoverer of the first skull cap of Peking Man.

Showcase exhibiting fossils of Peking Man.



Peking Man and His Culture

The actual fossils of Peking Man shown in comparison with the skeletal features of apes and modern man point out their physical similarities and dissimilarities, and present a clear picture of the evolution from ape through ape-man to man.

The skull structure of Peking Man, who is an ape-man, is more developed than that of the ape but more primitive than that of modern man. He had protruding brow ridges, a receding chin, and cheekbones and jaw which thrust forward. The skull vault was low, with a receding forehead. The widest section of the skull was situated just above the ear cavities, instead of higher up as in modern man. Peking Man's cranial capacity was more than twice that of the modern ape, but only two-thirds that of modern man.

The ancient ape stood semi-erect, sometimes walking with the help of its forelimbs, which were longer than its hind limbs. Its spinal column was arc-shaped. With Peking Man and modern man, on the other hand, having already walked erect for a long time, there is a clear division of labor between

the fore and hind limbs, and the former have become shorter. Their spinal columns have taken on the shape of an elongated "S". The thigh bone (femur) of Peking Man is similar to that of modern man, having a long ridge at the back to which tendons and flesh were attached, something which the ape did not have. This shows that, like today's man, Peking Man had well-developed muscles that enabled him to walk with his knee joints straight.

The fossils and reconstructions also show that it was labor which brought about the evolution from ape to ape-man. The ancient apes that lived in great forests 20,000,000 years ago are the common ancestor of ape and man. After that time tremendous changes took place on the earth. The climate became drier and the forests began to diminish. One branch of the ancient apes remained in the thinning forests and developed into modern apes. Another branch was forced to come down to the ground to find sustenance. Accidental use of such natural tools as sticks and stones gradually led to constant use of them. This in turn led to a more and more erect posture and further division of labor between hands and feet, thus completing a step of decisive significance in the evolution from ape to man. Tool-making and other labor stimulated the development of the brain.

Stone implements used by Peking Man include tools with straight, concave or convex blades for cutting and scraping meat from captured beasts, scrapers for shaping wooden sticks, choppers, and hammers and anvils for making stone tools.

The layers of ash and burnt bones and rocks dug from the cave inhabited by Peking Man prove that he used fire not only to keep warm and drive away beasts but also to cook. This makes Peking Man the earliest-known human to use fire.

On display are a large number of animal fossils excavated at Choukoutien. There were the ferocious sabre-toothed tiger and *Namadicus*

elephant that inhabited the forests, the carrion-eating hyena, and animals that dwelt on the grasslands and in the rivers, such as the large-horned deer, camels, ostriches, water buffaloes and beavers. These fossils are helpful in determining the natural environment of Choukoutien in that remote age and also provide an idea of how primitive mankind developed through the struggle with nature.

Discovery of Peking Man

The fossils of Peking Man, the stone artifacts, burnt bones and layers of ash mentioned above were all excavated at the cave just southeast of the exhibition room. The deposits in the cave date from the Middle Pleistocene age, 400,000 to 500,000 years ago. The cave is about 140 meters long and measures 42 meters at the widest place. The 40-meter-thick deposits are in 13 layers, composed of pebbles, sand, mud, breccia and ash. Relics excavated so far include fossilized bones representing 40 individuals, young and old, of both sexes, tens of thousands of stone artifacts, fossils of more than a hundred kinds of animals, and evidence of the use of fire. The ape-man cave at Choukoutien contains one of the world's richest stores of fossils of ancient man and animals and stone artifacts known to date.

The site of the ape-man cave, when it was first noted in 1921, was a quarry in a thick stratum of limestone from the Ordovician period, long worked by the local people. The quarry laborers had often dug up animal fossils, which they called "dragon bones". There were such huge quantities of them that the spot was known as Dragon Bone Hill. Large-scale excavations began in 1927. A tooth found that year led to knowledge of the man which was subsequently named *Sinanthropus pekinensis*. In 1928 two lower jaws (mandibles), one of a child and one of an adult, and some teeth were recovered. The unearthing on December 2, 1929 of a complete skull excited world academic attention and laid a firm foundation for Peking Man's place in science.

The author (second from right) and fellow researchers examine a new excavation.





Dragon Bone Hill at Choukoutien. Arrow indicates the spot where the fossils of Peking Man were discovered.



The cave inhabited by Peking Man.

The discovery of the skull of Peking Man and the numerous stone implements and layers of ash provided the "missing link" — the stage between ape and man — in Darwin's theory of evolution from ape to man. It also provided an answer to the classification of Java Man discovered 20 years previously, as the morphological characteristics of Java Man were similar to those of Peking Man. Before this, Java Man had not been recognized as an ape-man but was regarded as a special kind of ape.

Quite a number of Peking Man fossils had been discovered before liberation, but under reactionary governments subservient to semi-colonial rule Chinese scientists were deprived of the right to study them. All the original specimens of Peking Man fossils disappeared in 1941 while in the hands of Americans following the outbreak of World War II.

Post-liberation Discoveries

Excavations at Choukoutien were interrupted in 1937 after the war against Japanese aggression began. The work was resumed only after liberation in 1949 under the Communist Party and People's Government. In 1949 and 1951 fragments of an upper arm bone (humerus) and shin bone (tibia) and five teeth of Peking Man were discovered. In 1959, during the big leap forward, a mandible of Peking Man was unearthed in the same cave. In 1966 at the outset of the cultural revolution a fairly complete skull cap was recovered.

The site of the Peking Man discoveries was among the first group of important national cultural sites listed in 1961 by the State Council as places to be preserved. The original exhibition there has been enriched to form the present one, which opened in 1972. Nearby sites of excavation also open for inspection add to the viewer's understanding of prehistoric man. Today Choukoutien is visited by one to two thousand people every day.

Since liberation the study and search for man's ancestors has gone on in other parts of the country as well, for China's vast land area was a warm place during the Quaternary period and therefore an important area for the development of ancient man.

The ranks of Chinese paleontologists and paleoanthropologists have grown from only a few people before liberation to several scores today. The masses of the people have been instructed in knowledge about digging for fossils so that more people are taking an interest in preserving them. This has resulted in the discovery of more fossils of ancient man in various stages of development. One of the most notable finds was Lantian Man, who lived earlier than Peking Man, discovered in 1963 near Sian in northwest China's Shensi province.

From the time of the middle Paleolithic age, beginning about 200,000 years ago, man is known as *Paleoanthropus*. His cranial

capacity was now fairly close to that of modern man, though the skeletal structure retains some primitive traits. Examples of *Paleoanthropus* discovered in China so far include Mapa Man from Chuchiang, Kwangtung province in south China, Changyang Man from the valley of the Yangtze River in central China's Hupeh province, and Tingtsun Man from Hsiangfen in the valley of the Yellow River in the north China province of Shansi.

Man from about 40,000 years ago onward, that is, from the time of the late Paleolithic age, is known as *Neoanthropus*. In physical structure he was practically the same as modern man. Eight skulls of *Neoanthropus* who lived about 10,000 to 20,000 years ago were discovered in 1933 in a cave near the top of Dragon Bone Hill at Choukoutien and were given the name Upper Cave Man. But like those of Peking Man, these specimens of Upper Cave Man, last heard of in American hands, have disappeared. Fossils of *Neoanthropus* found after liberation include Ordos Man from Inner Mongolia (one tooth of Ordos Man was discovered before liberation), Tzeyang Man from Szechuan, Liukiang Man from Kwangsi and Lichiang Man from Yunnan.

Fossils or reconstructed models of all three stages of prehistoric man are on exhibit at Choukoutien.

南
海
晨
歌

北平西便门大街
南
海
晨
歌
1955年
11月



Morning Song on the South China Sea, shell work.



Learning to Do Acupuncture, porcelain.



White Kitten with
Mantis, double-
faced embroidery.

Cultural Notes

*Colorful Array
of Arts
and Crafts*

THE group of clay figurines on the cover of this issue of *China Reconstructs* is named after the song the three plump children are singing, "I Love Peking's Tien An Men". As one looks at the three youngsters, heads held high, full of life and bubbling with health, one can almost hear their clear young voices singing aloud their love for Chairman Mao and their socialist motherland.

This kind of clay figurine from Huishan in Wusih, Kiangsu province, represents a folk art well known for over 400 years. It is

noted for simplicity of line, stylization and bright colors. It does not go in for realistic details. During the cultural revolution the artists did away with feudal and superstitious elements in the traditional pieces and created new works sounder in content and more artistic in presentation.

"I Love Peking's Tien An Men" was adapted from the traditional Wusih group "Three Plump Figures of Happiness" by an art academy graduate under the guidance of an old master. The artist brings new content to an old form by making the three figures lovable children from contemporary life, and eliminating the symbols with superstitious connotations which used to appear on the clothes and ornaments worn by them.

China's traditional arts and crafts go back thousands of years. As early as the Neolithic Age her pottery-makers had attained a very high standard in colored pottery. Lacquer ware of the Warring States period (476-221 B.C.) and embroideries of the Han dynasty (206 B.C. — A.D. 220) were of great artistic value. However, in feudal society the works into which the artists had poured their very souls were appropriated by the exploiting classes, who neither valued the wisdom and artistic ability of the laboring people nor protected their trades.

Many arts and crafts which were on the brink of extinction before liberation have since been developed greatly. During the cultural revolution the artists criticized and repudiated the revisionist line pushed by Liu Shao-chi and other swindlers and corrected wrong tendencies such as to take over everything from the past or completely negate all traditional art. The direction now is to integrate creation with utilizing China's heritage in the arts, that is, using traditional characteristics in creating the new and eliminating what was reactionary, vulgar and decadent in the old. Thus the works appearing in recent years have reached a new level in ideological content and artistic style.

Portraits of Real Life

Quite a number of new works have succeeded in reflecting China's socialist construction and the spirit of the people. For example, the boxwood carving "Tibetan Stockwoman" is a moving image of a liberated serf in Tibet. The fine, hard texture of the wood and its warm color and sheen are adaptable to both the intricate lines of the hair of the yak and the contours of the woman's face, filled with pride in her new life. The execution shows no mark of the knife. The spirit of the work is expressed through its simplicity of line, while the details convey an aura of truth.

The ivory carving "A New Sound in the Reeds" is a happy combination of socialist content and traditional technique which carries a nice feeling. It depicts a geological survey team and people of a minority nationality as their boat, making its way through the reeds up an unexplored creek on the frontier, startles a flock of wild geese, for ages the only inhabitants. The artist employs the special ivory-carving skill of delicate openwork so that the wings and feet of the geese as they rise in sudden flight barely touch each other and the tops of the reeds.

Tungyang in Chekiang province has been known for its wood carving for a thousand years, including its decorative carving on houses and furniture, relief panels, screens and objects of art. One very fine recent carving in high relief is a scene of medicinal herbs being grown extensively in the countryside, entitled "The Mountains Are Full of Herbs". Although it is made from a piece of wood less than two centimeters thick, the panorama is reproduced in several layers of depth.

Artists of Pakhoi, a coastal city in the Kwangsi Chuang Autonomous Region, used many-colored shells to create a lively picture of the local militiawomen going out to sea to fish at dawn. It is named "Morning Song on the South China Sea".

In stone carving, the technique of making full use of veins of natural

color, in the tradition of China's famous "mountain of grapes" carvings, has been used by a veteran artist in a new piece named "Kaoliang", made from a single piece of Chingtien stone. Symbolizing the fact that China has had excellent harvests year after year in the recent period, the work uses the red in the stone for heads of kaoliang and various other colors for other grains.

Treasures in Traditional Art

In recent years quite a few fine works of art on traditional themes have appeared. These include scenes of the struggles of the people of ancient times against feudal oppression as well as landscapes, flowers and birds of a bright and vigorous character. "The Uprising", a recent creation by Yang Shih-hui, a veteran artist in ivory, features Chen Sheng and Wu Kuang, peasant leaders who in 209 B.C. led an uprising of 900 peasants impressed into the army, in an attempt to overthrow the Chin dynasty rulers. They are depicted holding aloft their banners on bamboo poles, their right arms bared as a means of identifying each other. The work embodies the truth "Wherever there is oppression there is resistance".

(Continued on p. 48)

Chin Shih-mei, a veteran cloisonné worker at the Peking Art Handicrafts Factory, gives a demonstration for apprentices.





Tibetan Stockwoman, boxwood.

NEW CARVINGS

From the National Arts and Crafts Exhibition



Chrysanthemums and Bamboo, chrysanthemum stone.



Peacock Vase, mottled bronze.

Waterfall Cave, with water inside seen through a thin layer of agate.



(Continued from p. 45)

"Waterfall Cave" is a rare art treasure carved from a piece of agate enclosing water which archaeologists say was trapped inside it during a change in the earth's surface some 10,000 years ago. Out of the thin layer of transparent agate, through which the water inside can be seen, the artist has created a waterfall. Beside it are carved a monkey, a deer and some flowers.

An exquisite piece of embroidery which is equally finished on either side is "White Kitten with Mantis". The embroiderers have given the kitten lively eyes and fur that looks soft and fluffy. The kitten is so true to life that it seems as if it could be called out of the picture. The eyes are embroidered with silk thread of seven or eight different colors and its fur with silk only one twenty-fourth of the thickness of ordinary silk thread.

New Flowers

While carrying on and developing the traditional forms, China's artists have in recent years also created new forms in arts and crafts. For instance, they have made huge panels using feathers, tree bark, wheat straw and hair as raw materials.

Formerly the Tsinan Art Studio could only make flat-surface pictures out of the feathers of the peacock, golden pheasant and other birds. Now its artists can make such pictures in high relief. The huge panel "Mount Tai", one from this studio, expresses the magnificent grandeur of a famous scenic spot in a style all its own.

Bleached and re-dyed hair, which is harder than silk, has long been used in the same way as silk thread in rendering examples of fine calligraphy into embroidery. In recent years hair has been used to embroider huge

pictures originally done in the medium of Chinese ink with color. One such reproduction of the artist Hsu Pei-hung's well-known painting of horses recaptures the texture of the horses' hair.

A kind of opaque white porcelain from Fukien province, known as lard-white, was famous in the Ming dynasty but later became extinct. During the cultural revolution production of it was revived. Carved figurines made from this porcelain are well-liked.

China's art craftsmen widely apply their skills to making articles for everyday use such as parasols, folding fans, pottery, toys, glassware, wooden and bamboo ware and woven articles like baskets, mats and furniture, as well as the ornaments and embroidered national costumes of the minority peoples. These are very popular among the workers, peasants and soldiers.



China and Her Friends

In your June magazine I found a number of highly interesting articles which deepened my understanding for the Chinese people and China's constant struggle for progress and socialism.

Among them, memorials to the great writer and journalist, Mr. Edgar Snow, showed distinctly that the heroic struggle of the Chinese people has found and will always find friends all over the world and provokes the sympathy of the working masses.

P.H.

Vienna, Austria

The article "Edgar Snow—In Memoriam" shows that China is the friend of all supporters of progress whatever their nationality may be.

A.O.O.

Badagri, Nigeria

People's Strength

Generally speaking, all articles describing the strength of the people, their ingenuity and the miracles they have accomplished by using Marxism-Leninism under the

guidance of the Communist Party are vitally necessary in the fight against the contempt for the laboring people spread by the bourgeoisie in capitalist countries.

G.M

Lyons, France

Go Among the Masses

I was most interested in the article "What I Learned from the Workers and Peasants" (June 1972). Why? Because a person integrated with the masses will share their feelings. He will become familiar with the gun of the soldier, the hoe of the peasant and the lathe of the worker. He will enjoy the fruits and bear the sacrifices as one with all the people.

Close links with the masses bring knowledge of problems and better ways of solving them.

H.G.L.

Medellin, Colombia

Archaeology

I have especially enjoyed your articles on Chinese archaeological discoveries. I am a science teacher and I plan to show the article on the discoveries of the ichthyosaur fossils in Tibet as an example of continental drift.

A.J.P.

Flushing, U.S.A.

Learning Chinese

I take keen interest in learning the Chinese language and the step taken in this regard in the July 1972 issue is highly appreciated. I am sure that Pakistani readers will take keen interest in learning the Chinese language.

A.A.H.

Hyderabad, Pakistan

Building Socialism

After reading recent issues of your magazine I have learned: first that the revolutionary process of building socialism in one country is a very difficult one, but it can be successful only if it goes on day after day with patience and perseverance from the proletariat and the broad masses; second that without a party founded on Marxist-Leninist theory it is impossible to guide the proletariat and the broad masses from victory to victory on the road to socialism.

M.C.

La Spezia, Italy

Cities in China

The article "Shanghai Advances on the Socialist Road" (July 1972) tells us that the Shanghai people never once bowed to the imperialists. Now fundamental changes have taken place in the city, which are of course only the first step in a long march of ten thousand li. I like the articles about the cities in people's China.

H.A.A.

Berbera, Somalia



